

LINEMEN'S, WIREMEN'S
AND ELECTRICIAN'S
TOOLS

POCKET TOOL GUIDE "B"



MATHIAS KLEIN & SONS

CHICAGO, 562 W. Van Buren St.

NEW YORK

114 Liberty Street

SAN FRANCISCO

579 Howard Street

PORTRLAND ORE.

640 Morgan Bdg.

LOS ANGELES

Fernando Bldg.

FACTORY, Avondale Chicago, Ill.



KLEIN'S TOOLS

STANDARD FOR 30 YEARS

THIS MARK

Your Assurance of Reliability



KLEIN POLICIES

To make the name "**KLEIN**" stand for the best in tools and for reliable representation, honorable business dealing, value giving and satisfaction guaranteed. By following this policy Klein's business has expanded until it is now international in its scope.

Klein tools cost but a trifle more than the common run factory grades, and will save the difference in time and perfection of work on the first important job.

CAUTION—All genuine Klein Tools are stamped with the full name: "**M. KLEIN & SONS,**" or with the above trade mark.

LINEMEN'S PLIERS

In presenting this catalog for your perusal we do so, confident that your consideration of its contents will prove to your interest.

Klein pliers, in fact all of Klein products, are acknowledged to be the standard for efficiency and quality.

The pliers are made from special bar steel, forged, machined and fitted by skilled mechanics some of them in the employ of the Klein factories for thirty years. The tempering is done with special care and by methods which long experience has found to give the best results.

The cutters on these pliers are guaranteed for a period of one year against chipping or crumbling.

All Klein products are stamped M. Klein & Sons and for our own protection and the protection of our customers we have adopted the special trade mark shown on the front cover; this is now impressed on all Klein products.

The success of Klein products has brought a lot of imitators copying Klein designs, but hear and heed; to look like Klein's does not make them Klein's. So look for the stamp M. KLEIN & SONS or this

trade mark.



**In ordering, to avoid mistakes, please
order by numbers.**

Klein's Linemen's Side Cutting Pliers

(“DIAMOND SPECIAL”)

FOR USE ON BARE COPPER OR IRON WIRE



List Price Each

No. 312, 5 in. plain. \$2.00

No. 312A. 6 " " 2.50

No. 312B. 7 " " 3.00

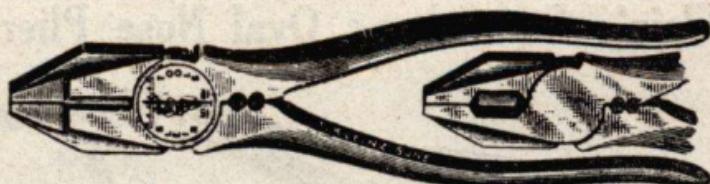
List Price Each

No. 312C. 8 in. plain. \$3.60

No. 312D. 9 " " 4.00

No. 312E. 10 " " 5.50

WITH SLEEVE JOINT TWISTERS



No. 312F. 7 inch plain. Each \$3.50

No. 312G. 8 " " Each 4.50

No. 312H. 9 " " Each 5.00

Klein's Linemen's Side Cutting Pliers

(“WORLD SPECIAL”)

FOR USE ON INSULATED WIRE



List Price Each

No. 1312 5 in. plain. \$2.00

No. 1312A. 6 " " 2.50

No. 1312B. 7 " " 3.00

List Price Each

No. 1312C. 8 in. plain. \$3.60

No. 1312D. 9 " " 4.00

No. 1312E. 10 " " 5.50

WITH SLEEVE JOINT TWISTERS



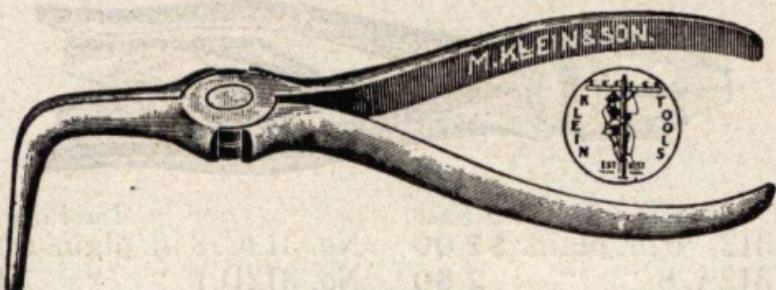
No. 1312F. 7 inch plain. Each \$3.50

No. 1312G. 8 " " Each 4.50

No. 1312H. 9 " " Each 5.00

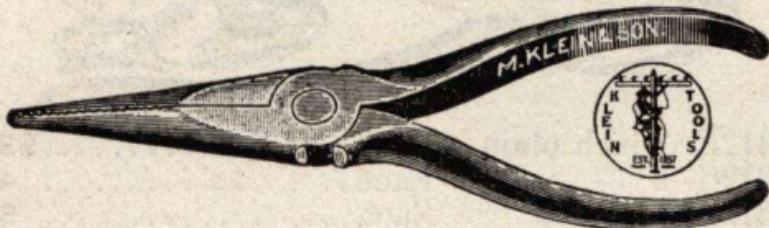
Klein's Extra Long Curved Nose Pliers

Polished Heads—Black Handles



No. 1319 C. 6 inch, each..... List Price
\$2.00

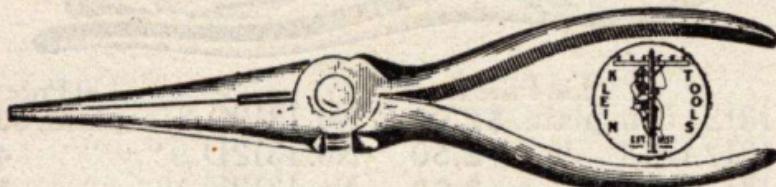
Klein's Extra Long Oval Nose Pliers



Without Side Cutters

No. 319 N. 5 inch, each.....	\$1.60
No. 319 H. 6 inch, each.....	1.80
No. 1319 H. 7 inch, each.....	2.00

Klein's Extra Long Oval Nose Pliers



With Side Cutters

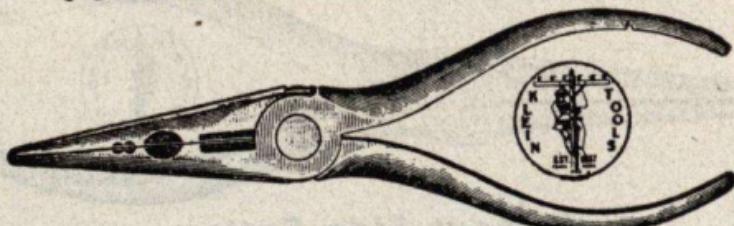
No. 319 O. 5 inch, each.....	\$1.80
No. 319 I. 6 inch, each.....	2.00
Nt. 1319 I. 7 inch, each.....	2.20

Nickel Plating Pliers any Style

5—6 inch, each net extra.....	25 Cents
7 inch, each net extra.....	30 Cents
8—9 inch, each net extra.....	35 Cents
10 inch, each net extra.....	40 Cents

Klein's Extra Long Oval Nose Splicing Pliers

Polished Heads—Black Handles

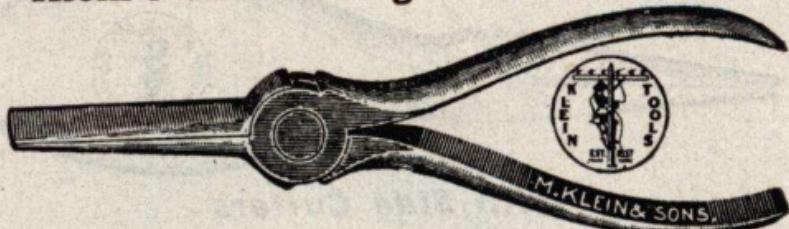


With Side Cutters

For Splicing No. 14 B. & S. Copper Wire

	List Price
No. 319 S. 6 inch, each.....	\$2.70
No. 1319 S. 7 inch, each.....	3.00

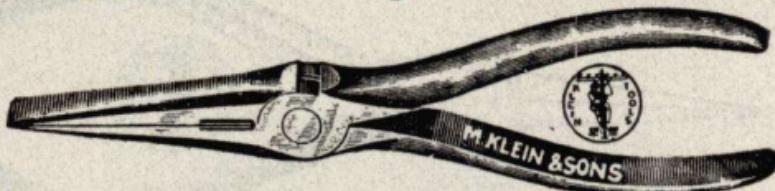
Klein's Extra Long Duck Bill Pliers



Without Side Cutters

No. 318 E. 5 inch, each.....	\$1.60
No. 318 D. 6 inch, each.....	1.80
No. 1318 D. 7 inch, each.....	2.00

Klein's Extra Long Duck Bill Pliers



With Side Cutters

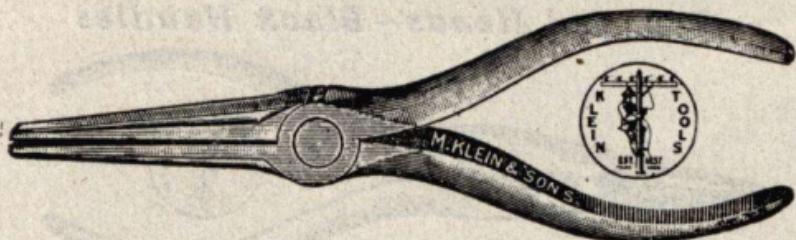
No. 318 G. 5 inch, each.....	\$1.80
No. 318 F. 6 inch, each.....	2.00
No. 1318 F. 7 inch, each.....	2.20

Nickel Plating Pliers any Style

5—6 inch, each net extra.....	25 Cents
7 inch, each net extra.....	30 Cents
8—9 inch, each net extra.....	35 Cents
10 inch, each net extra.....	40 Cents

Klein's Extra Long Flat Nose Pliers

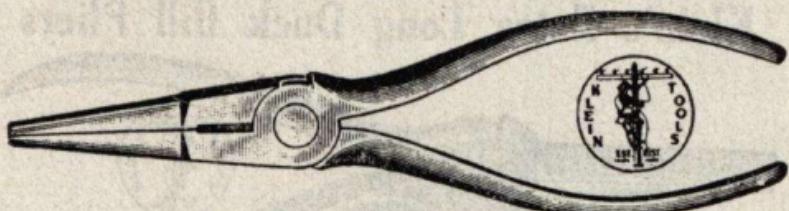
Polished Heads—Black Handles



Without Side Cutters

	List Price
No. 318 O. 5 inch, each.....	\$1.60
No. 318 P. 6 inch, each.....	1.80
No. 1318 P. 7 inch, each.....	2.00

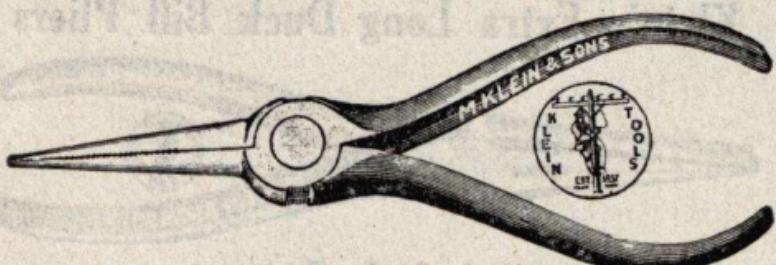
Klein's Extra Long Flat Nose Pliers



With Side Cutters

No. 318 R. 5 inch, each.....	\$1.80
No. 318 S. 6 inch, each.....	2.00
No. 1318 S. 7 inch, each.....	2.20

Klein's Extra Long Needle Nose Pliers



Without Side Cutters

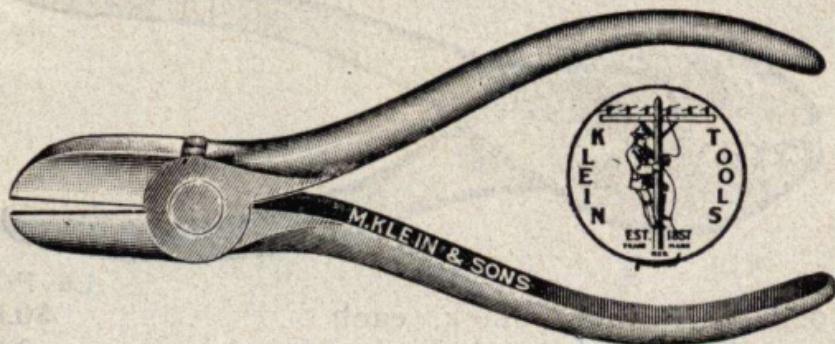
No. 319 T. 5 inch, Each.....	\$1.60
No. 319 U. 6 inch, Each.....	1.80
No. 319 V. 7 inch, Each.....	2.00

Nickel Plating Pliers any Style

5—6 inch, each net extra.....	25 Cents
7 inch, each net extra.....	30 Cents
8—9 inch, each net extra.....	35 Cents
10 inch, each net extra.....	40 Cents

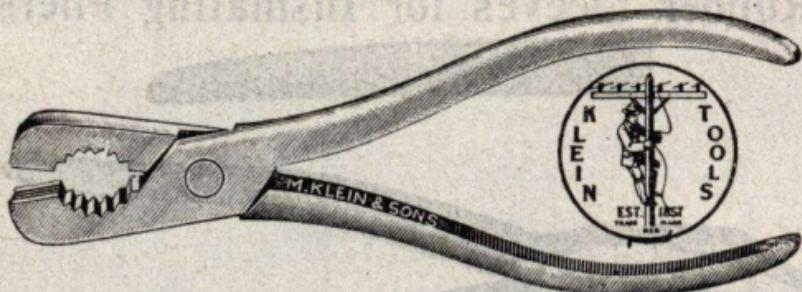
Klein's Oblique Diagonal Cutting Pliers

Polished Heads—Black Handles



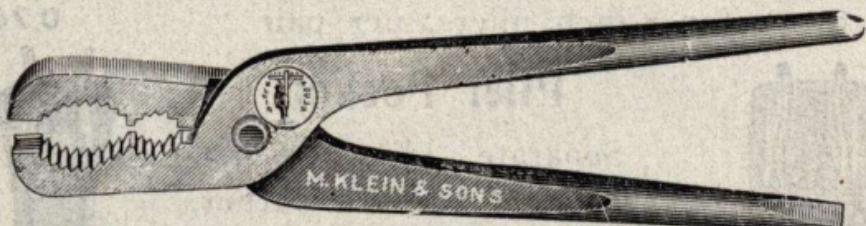
	List Price
No. 3164 5 inch, each.....	\$2.00
No. 3164 A. 6 inch, each.....	2.20

Klein's Burner or Fixture Plier



No. 630 K. 6 inch, Polished, each.....	\$1.10
--	--------

Klein's Gas Pliers

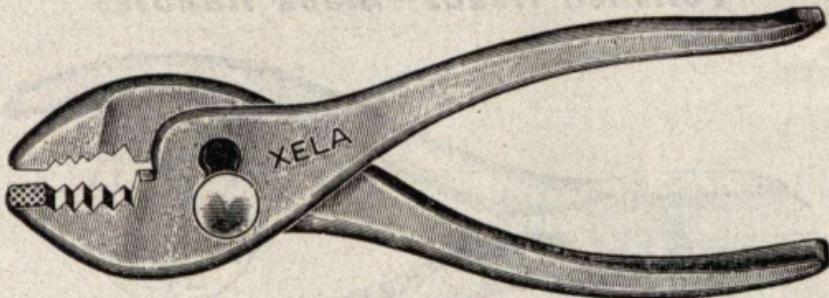


No. 024 K. 7 inch, each.....	\$1.20
No. 025 K. 8 inch, each.....	1.40
No. 026 K. 10 inch, each.....	1.60
No. 027 K. 12 inch, each.....	1.80

Nickel Plating Pliers any Style

5—6 inch, each net extra.....	25 Cents
7 inch, each net extra.....	30 Cents
8—9 inch, each net extra.....	35 Cents
10 inch, each net extra.....	40 Cents

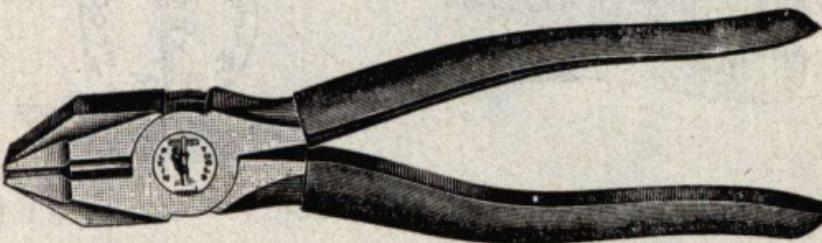
"Xela" Brand Combination Gas Pliers, WITH SIDE CUTTER



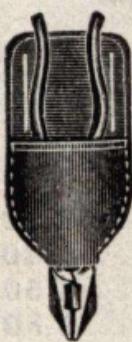
List Price

No. 631, 6-inch, black, each.....	\$0.80
No. 632, 6-inch, nickel plated, each.....	0.90
No. 633A, 8-inch, black, each.....	1.00
No. 633, 8-inch, nickel plated, each.....	1.10
No. 634A, 10-inch, black, each.....	1.10
No. 634, 10-inch, nickel plated, each.....	1.30

Rubber Sleeves for Insulating Pliers



No. 86, for 6-inch pliers, per pair.....	\$0.50
No. 87, for 7-inch pliers, per pair.....	0.60
No. 88, for 8-inch pliers, per pair.....	0.70



Plier Pocket

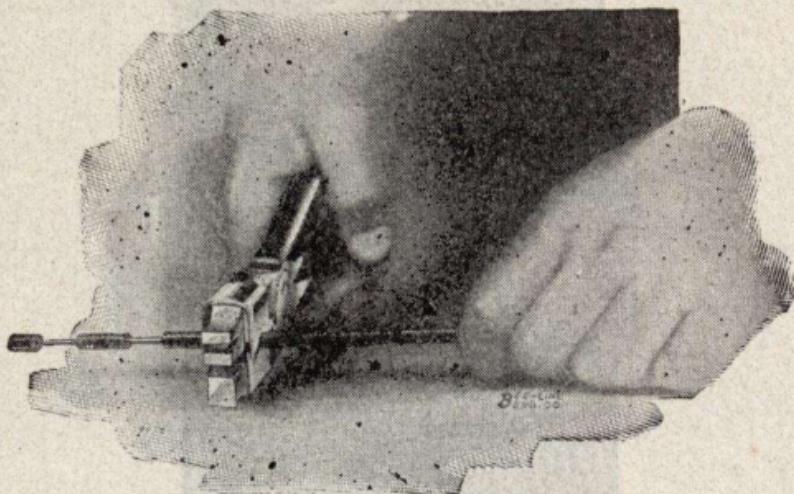
Separate plier pocket,
made of best leather,
holds one pair pliers,
screw driver or any other
small tool, arranged with
loop to slip on tool belt.



No. 382D.	No. 1382D.
No. 382D, Leather Plier Pocket to slip on tool belt	\$1.00
No. 1382D, Leather Plier Pocket to slip on tool belt	1.00

Goodridge Wire Skinning Pliers

For Use on No. 14 Insulated Wire Principally



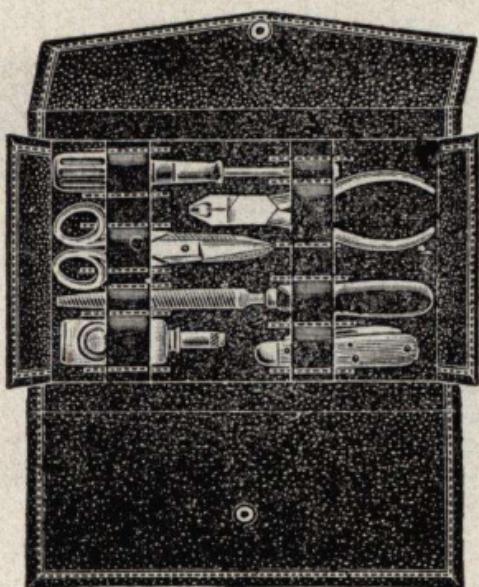
No. 200-8 List Price
\$7.00

Illustration shows the tool in the act of cutting the insulation. The wire is gripped between the V shaped knives and the handles forced home. When released it will be found that the insulation is notched across, also lengthwise. Now with the nose of the tool pinch the insulation just back of the long cut and the insulation will come off the wire at once. If a longer surface of bare wire is wanted, make one cut, then move the tool along and make another; then pinch off both together.

For use on Duplex wire split the outer cover in any convenient way, then pull the wires apart and use the tool as described above.

For stripping ends of lamp cord, begin as in cutting insulation, then after handles have been brought down, grasp the tool so that the hinge will be in the palm of the hand and the thumb and forefinger over the nose, allowing the first and second fingers to straddle the cord. Then pull, and all except the inner layer will come off. Now place the wire between the side cutters (holding them slightly apart) and pull the cord through. This operation will remove the inner layer.

Electrician's Pocket Tool Kit



No. 403 A

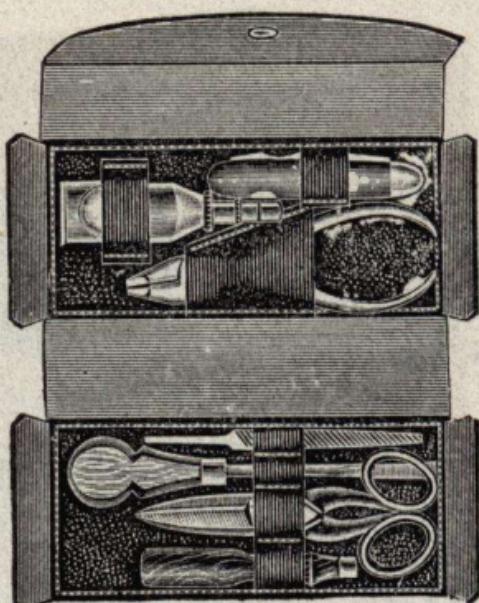
List Price

No. 403-A, with tools each.....\$8.00

This pocket tool kit consists of genuine leather case, of convenient pocketbook style, with firm metallic clasp, and measures $4\frac{1}{2}$ x9 inches when closed. It contains the following tools, viz; one single blade Klein "Xela" electrician's Knife; one pair 5-in. nickel plated Side Cutting Plier; one $2\frac{1}{2}$ inch genuine "Xela" Screw Driver; one pair $5\frac{1}{2}$ -inch Klein's "Xela" nickel plated electrician's Scissors; one 3-inch half round Mill File, with black ebonized wood handle; one small nickel plated Oil Can, and one pair $4\frac{1}{2}$ -inch nickel plated tweezers.

Case can be furnished either in black or russet leather.

Electrician's Pocket Tool Kit



No. 403 D

List Price

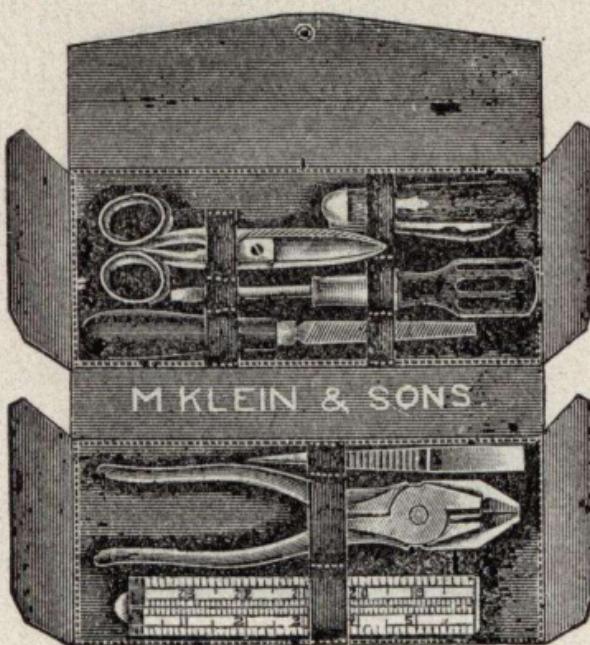
No. 403 D, with tools, each..... \$8.00

This outfit consists of genuine leather case, but of a somewhat different pattern than our other styles—it will be observed that the tools are arranged in two sections, so that when the case is closed, one section is over the other. This arrangement makes a somewhat more compact kit, measuring $1\frac{1}{2} \times 3 \times 6\frac{1}{2}$ inches; when closed it is held by a metal clasp. It contains the following tools, viz: one single blade Klein's "Xela" electrician's knife, one nickel plated oil can, one pair nickel plated 5 inch side cutting pliers, 3 inch file, with black ebonized wood tool or file handle, one pair 5 inch nickel plated Klein's "Xela" electrician's scissors, one $3\frac{1}{2}$ inch nickel plated screw driver.

Case can be furnished in either russet or black leather.

Klein's Pocket Kit of Tools

A Place for Everything and Everything in it's Place



List Price

No. 403-I, Kit complete \$11.00

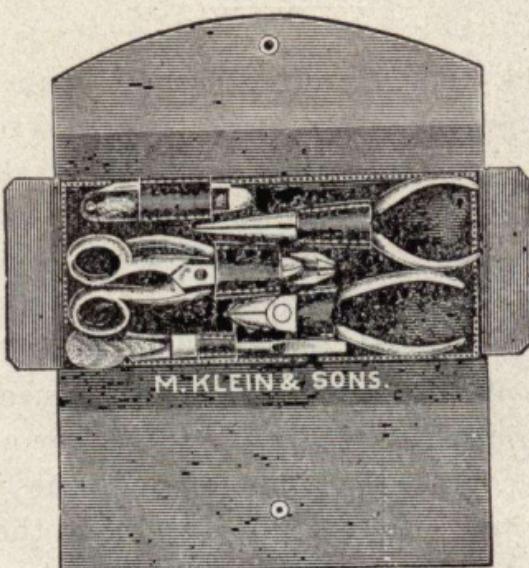
This kit was designed to fill a long felt want and it has proven immensely popular from the start. It contains all the necessary tools for electrical construction or repair work and each is securely held in its own place. The case is of genuine leather, durable and compact. It fits easily in the pocket, is a great convenience and extremely handy for those engaged in electrical work of any description.

The kit contains seven tools, all of which are in constant use. Each one is of superior quality and will give excellent service. They are Klein's 7-inch special side cutting pliers, hand forged, with knives of guaranteed quality; 5-inch nickel plated scissors; double-bladed knife screw driver and wire scraper combined; 3-inch half round mill file and handle; 2 1/2-in. "Xela" screw driver, 3 1/2-in. Nickel plated tweezer and 2-foot 4-fold boxwood rule.

Genuine leather case, durable and compact, 8-inches long, 3 1/2-inches in width and 2 inches high when closed, containing 7 tools as described complete.

Case can be furnished in either russet or black leather.

Klein's Electrician's Pocket Tool Kit



No. 403 K

List Price

No. 403 K, with tools, each.....\$12.50

Genuine leather case, contains a selection of Klein tools such as have been found particularly desirable by Electricians and wire men on switchboard and telephone work. It is of convenient pocket book style, with firm metallic clasp and measures 4x9 inches. It contains the following tools: one single blade Klein's "Xela" electrician's knife, one 5 inch Klein special side cutting pliers, one 5 inch Klein oblique diagonal pliers, one 6 inch Klein long nose side cutting pliers, one $3\frac{1}{2}$ inch blade nickel plated screw driver and one pair $5\frac{1}{2}$ inch Klein's "Xela" electrician's scissors.

NOTE—The pliers are plain black finish, if nickel plated pliers are wanted add 25 cents extra each, for plating.

Case can be furnished in either russet or black leather.

SPLICING CLAMPS.

Of all the tools in use, the lineman's splicing clamp is probably the most abused, for in the absence of something more appropriate, the splicing clamp will have to do the service of hammer, wrench and crow bar and then again it must be of service in making electrically and mechanically good joints. It is obvious that not any old thing is profitable. We will not speak of abuse resisting qualities which are only incidental after all, but the tool must be properly proportioned, the jaws must be properly tempered so as to preserve the grip, the handles must be resistant to bending strain and retain their normal set and the dies for holding the wires must fit. To all this especial attention is given in the Klein Splicing Clamps. There are several styles and quite a number of combinations suitable for all purposes comprised in the Klein line of Splicing Clamp and on the following pages we show the regular standard patterns of a variety of combinations. There are also several vest pocket sizes. For a complete display write to us for a complete Klein catalogue.

The following pages show a line of the standard numbers of splicing clamps. We give the wire sizes, both iron and copper, which the clamps are fitted for.

No. 301 is arranged to handle the wires used in telegraph work.

No. 302, for telephone work.

No. 302-A, also for telephone work, it has one

more large hole than No. 302, which is useful also in serving guy wire.

No. 303 is the style used by the electric light linemen.

No. 307 for twisting copper sleeve joints of the sizes mentioned.

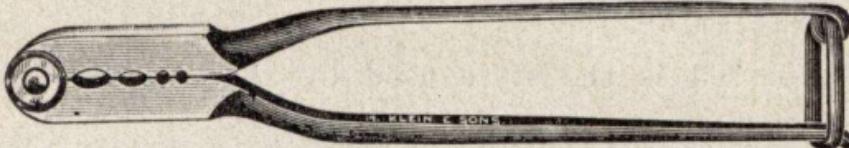
No. 309 is a combination tool for handling iron and copper wire and sleeve joints.

No. 0309—The round hole side is the same as No. 309 but the sleeve side is for a range of larger sleeves.

No. 309-C—The round hole side is the same as No. 309. The reverse side is a combination for telegraph, electric light and telephone wires.

No. 308 and No. 309-B are vest pocket sizes for the telephone inspector or troubleman and with these tools nearly all the inspector's and troubleman's work can be done.

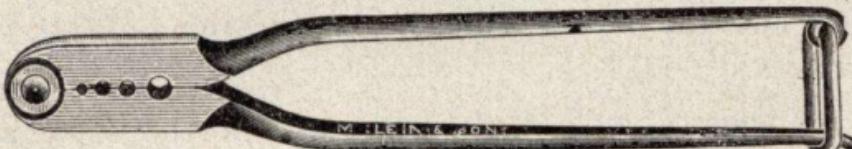
Klein's Splicing Clamps



No. 301.....\$3.20

for Nos. 4, 6, 12 and 14 iron wire,
or Nos. 2, 4, 10 and 12 copper wire

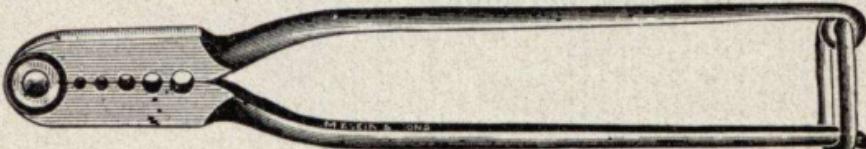
Length 10 inches.



No. 302.....\$3.20

for Nos. 8, 10, 12 and 14 iron wire,
or Nos. 6, 8, 10 and 12 copper wire

Length 10 inches.



No. 302 A.....\$3.40

for Nos. 6, 8, 10, 12 and 14 iron wire,
or Nos. 4, 6, 8, 10 and 12 copper wire

Length 10 $\frac{1}{2}$ inches.

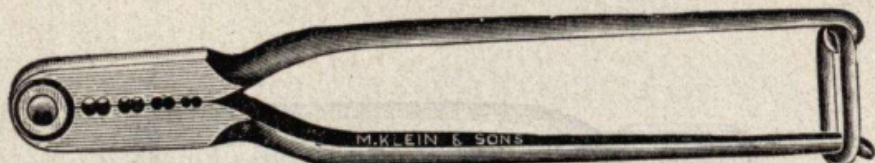


No. 303.....\$3.20

for Nos. 2, 4, 6 and 12 copper wire,
or Nos. 4, 6, 8 and 12 iron wire

Length 10 $\frac{1}{2}$ inches.

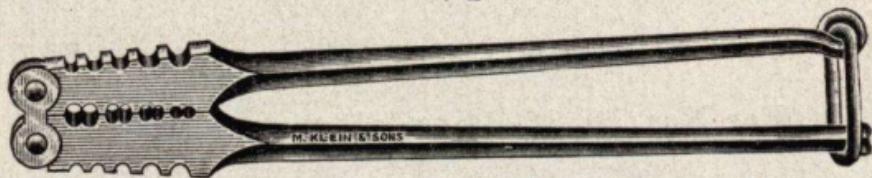
Klein's Splicing Clamps



No. 307.....\$3.20

for Nos. 8, 10, 12 and 14 B. & S. copper sleeves
or 10, 12, 14 and 16 B. W. G. iron sleeves.

Length $10\frac{1}{2}$ inches.



No. 309.....\$3.60

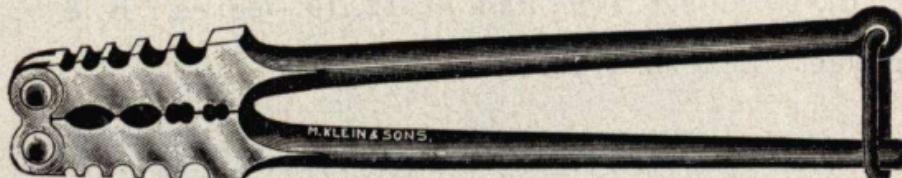
5 holes for Nos. 6, 8, 10, 12 and 14 iron wire, 4, 6, 8,
10 and 12 copper wire, and 8, 10, 12 and 14 B. & S.
copper sleeves or 10, 12, 14 and 16 B. W. G.
iron sleeves.

Length $10\frac{3}{4}$ inches.

No. 0309.....\$3.60

Same as above only fitted for 6, 8, 10 and 12 B. & S.
copper sleeves or 8, 10, 12 and 14 iron sleeves 6 to 14
iron wire and 4 to 12 copper wire.

Length $10\frac{3}{4}$ inches.



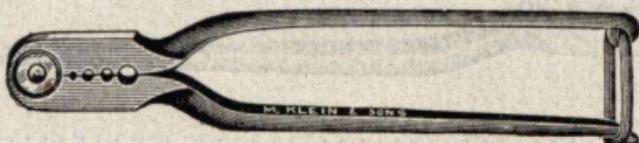
No. 309C.....\$3.60

5 round holes for 6, 8, 10, 12, 14 iron wire and 4, 6, 8, 10,
12 copper wire. 2 oval holes for 4, 6 iron wire and 2
and 4 copper wire, 2 double holes for 10 and 12 B. & S.
copper sleeves or 12 and 14 B. W. G. iron sleeves.

Length $10\frac{3}{4}$ inches.

*For complete description and display write us
for a copy of Klein Catalog.*

Klein's "Baby" Splicing Clamps

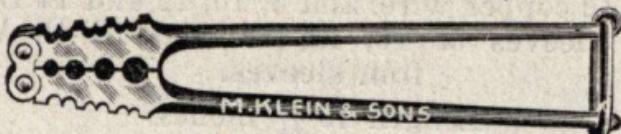


List Price

308 "Baby" pattern.....\$2.70

For Nos. 10, 12, 14 and 16 copper wire.

Length, 7 inches.



309A\$3.30

Four holes, for Nos. 8, 10, 12, 14 iron wire; 6, 8, 10, 12 copper wire, and 10, 12, 14 sleeves. B. & S. gauge. Length, 9 inches.

309B\$3.20

Has 4 round holes for Nos. 10, 12, 14 and 16 iron wire, and 8, 10, 12 and 14 copper wire. 3 holes for 10, 12 and 14 sleeves. B. & S. gauge.

Similar to No. 309A, but only 7 inches long.

For other types, see Klein general catalog.

Klein's Combination Tie Wire, Sleeve And Splicing Wrench

W. U. Style



	List Price
No. 320A, full polished.....	\$3.00

For tying in with Nos. 7 to 11 copper wire; for splicing Nos. 8 and 9 iron wire, and for twisting Nos. 9 and 10 B. & S. gauge sleeves. Length, 7 inches.

Klein's Steel Splicing Wrench



No. 321, full polished.....	\$1.70
Nos. 4 and 6 iron wire or 2 and 4 copper wire.	
No. 322, full polished.....	1.70
Nos. 8 and 9 iron wire or 6 and 8 copper wire.	
No. 323, full polished.....	1.70
Nos. 10 and 12 iron wire or 8 and 10 copper wire. All above wrenches 7 inches.	

Nos. 4 and 6 iron wire or 2 and 4 copper wire.
No. 322, full polished..... 1.70
Nos. 8 and 9 iron wire or 6 and 8 copper wire.
No. 323, full polished..... 1.70

Nos. 10 and 12 iron wire or 8 and 10 copper wire.
All above wrenches 7 inches.

These wrenches are used with the Splicing Clamp.

The ends of the wires to be connected are held with the Splicing Clamp, and the projecting end is caught with the shoulder of the wrench, and by turning the wrench around continuously, it will coil the wire tightly and evenly on the line wire, making a clean, tight splice.

Klein's Steel Lag Screw Wrench



List Price

No. 325. Length 11½ in., each.....\$2.50

These wrenches are forged from select bar steel. The jaw is made tapering allowing it to take any ordinary size machine bolts, nuts, or lag screws, from $\frac{3}{8}$ inch to $\frac{5}{8}$ inch. The hook is a means of attaching the wrench to the tool belt, and it serves to keep the heads of bolts within the jaws of the wrench when in use.

Klein's Combination Lag Screw Wrench



No. 326. Length 13½ inch, each.....\$3.00

Forged from select bar steel. The slot in this wrench is formed in a cross shape, and will fit machine bolts, nuts, or lag screws, from $\frac{3}{8}$ inch to $\frac{5}{8}$ inch. The small end of the wrench is arranged for 5-16 inch machine bolts or lag screws. The round hole allowing the end of a bolt to come through as the nut is run on.

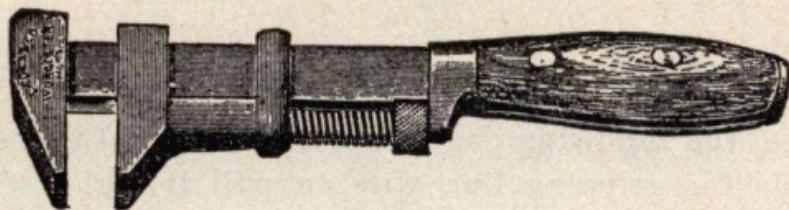
Klein's Terminal Wrench



No. 63 W, each.....\$0.30

This wrench is especially adapted for use on terminal nuts, receivers, transmitters, and binding posts, etc. There are three different side openings, with dimensions as follows: $\frac{3}{8}$ inch, $\frac{5}{8}$ inch, and 7-16 inch, which will engage either square or hexagonal nuts. One end is bent at an angle of 45 degrees, to allow its use in confined places. Total length, 2 13-16 inches. No. 63W, each.....\$0.30

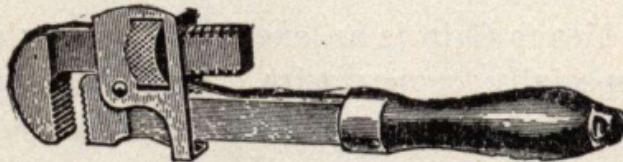
Solid Handle Wrench



	List Price
No. 595, 6-inch, opens $\frac{7}{8}$ -inch, each.....	\$0.90
No. 596, 8-inch, opens $1\frac{1}{4}$ -inch, each.....	1.00
No. 597, 10-inch, opens $1\frac{3}{4}$ -inch, each.....	1.20
No. 598, 12-inch, opens $2\frac{1}{8}$ -inch, each.....	1.40
No. 599, 15-inch, opens $2\frac{3}{4}$ -inch, each.....	2.40
No. 600, 18-inch, opens $3\frac{1}{8}$ -inch, each.....	3.00
No. 601, 21-inch, opens $4\frac{1}{4}$ -inch, each.....	3.60

The entire Bar of this wrench is one solid Steel forging, making it the strongest wrench made.

Adjustable Pipe Wrench



Wrench, Wood Handle, 6 to 18 inches

No. 590	6 inch, each.....	\$1.60
No. 590A	8 inch, each.....	1.60
No. 591	10 inch, each.....	1.80
No. 591A	14 inch, each.....	2.40
No. 592	18 inch, each.....	3.20
No. 592A	24 inch, each.....	4.80
No. 593	36 inch, each.....	10.80
No. 593A	48 inch, each.....	16.00

All parts interchangeable.

Made from high grade steel and material throughout.

WOOD HANDLE WRENCHES

Made in 6, 8, 10, and 14 inch sizes.

STEEL HANDLE WRENCHES

Made in 10, 14, 18, 24, 36 and 48 inch sizes

WIRE GRIPS.

On the following pages are shown several types of tools for gripping line wire to pull it tight. The tools are usually attached to some device for getting a purchase; this may be either block and tackle or the strap and roller device shown in connection with "Chicago Lineman's Tool." (See next page.) For short pulls this device is excellent as the load can be held at any point by throwing the curved eccentric, provided for the purpose, against the pulling strap and so locking it in that position. A reversal of the eccentric will release the hold.

Under figures 481 to 2336-A are shown a number of devices to which these clamps can be attached to make an effective pulling-up set.

The Chicago Grip is an excellent tool for gripping wire, especially copper wire. By referring to the cut it will be noted that the gripping jaws are parallel, the surfaces are smooth and copper line wire will not be dented or nicked while being held in the jaws. The lower jaw is one with the main body and the upper jaw is moved by the upright lever, which again is attached to the draw bar and link and the harder the pull, the tighter the grip. The body and lever are steel drop forgings and the links are made of bar steel. The pivots are turned on a screw machine. The machining and assembling is done by skilled workmen. The finish on the two smaller sizes is nickel and on the larger, black oxidized copper. The type adapted to insulated wire has an extension lip on both the upper and the lower jaw along the entire length. This is to better encircle the wire and it prevents injury to the insula-

tion. The upper jaw is provided with a number of depressions and when strain is on the grip, the insulation is slightly forced up into these depressions and this prevents slipping. Note that there are no teeth pressing into the insulation.

For Aluminum Cable we use this same type, only, both jaws are left entirely smooth.

The Haven's Clamp, Klein's Clamp style A and Come-Along Clamp are popular for handling iron line wire, fence wire, vineyard trellis, etc., and the larger (No. 369) Haven's Clamp is much used for guying poles and for trouble work on trolley wire; it is adjusted so quickly and is so effective that it is indispensable for this work.

Klein's Havens' Steel Clamp

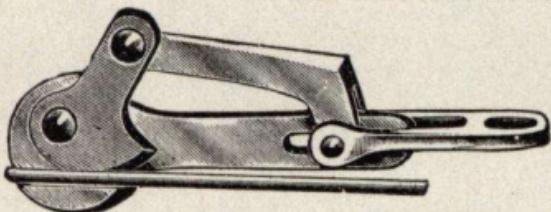


Electro Galvanized Finish

List Price

No. 368. For No. 8 Wire and finer. Each.. \$3.00
No. 369. For No. ½ Wire and finer. Each.. 5.00
This is a very efficient clamp for all around work.

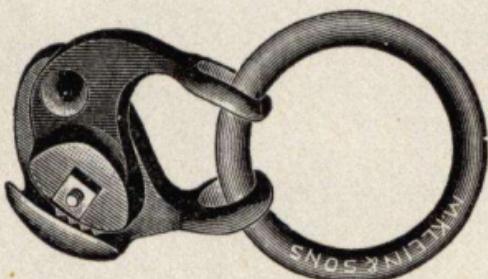
Klein's Clamp -- Style A



No. 366. Polished brass. Each.....\$3.50
For No. 8 and finer wire

No. 367. Steel, (Galvanized). Each..... 5.50
For No. ½ inch and finer wire.

Klein's Come Along Clamp



Electro Galvanized Finish

No. 3710G, for No. 8 Wire and smaller, each \$1.30
No. 3711G, for No. 6 wire and smaller, each 1.80
No. 3712G, for No. 0 wire and smaller' each 2.20

ALSO OTHER STYLES

Klein's Strand or Messenger Grip



The
"Quick
Samson"

The grip shown in the cut has been designed and manufactured by MATHIAS KLEIN & SONS. It consists of a body, or retaining piece in which two steel wedge shape jaws move longitudinally. These jaws are arranged so as to move in either direction simultaneously, thus opening or closing them in unison. The gripping surface of the jaws is concave, and is provided with a series of milled teeth, spread over their entire length. These teeth grip into the spirals of the strand, and being uniformly distributed over the entire length of the jaw, grip the wire at very many points, thus taking a secure hold with the pressure distributed along the entire length of the gripping surface, so that no amount of strain falls sufficiently at one point to crush or injure the wire. The tackle is attached to the two oblong rings in the body piece; these rings being arranged central, insure a straight pull. The proportions of the various parts are calculated to carry any strain that is necessary to tighten the wire and the jaws are self adjusting. Made in the following sizes:

FOR MESSENGER WIRE

	List Price
No. 363U, Size 1-S, for 3-16 to 3-8 inch, each..	\$20.00
No. 363T, Size 2-S, for 1-4 to 1-2 inch, each..	22.00
No. 363S, Size 3-S, for 5-16 to 5-8 inch, each..	24.00

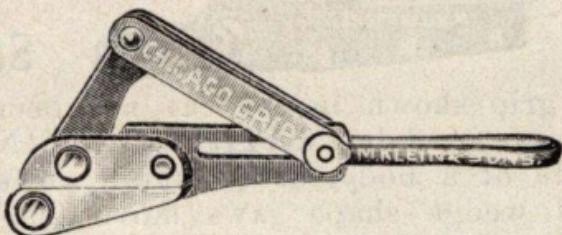
FOR BARE TROLLEY WIRE

A modification of the Quick Samson Grip is available for Trolley Wire. The jaws are not serrated, but only roughened.

No. 363C, Size 1-T, for No. 6 to 2-0 B. & S Wire, each	\$20.00
No. 363D, Size 2-T, for No. 2 to 4-0 B. & S. Wire, each	22.00
No. 363B, Size 3-T, 5-16 to $\frac{5}{8}$ inch B. & S. Wire, each	24.00

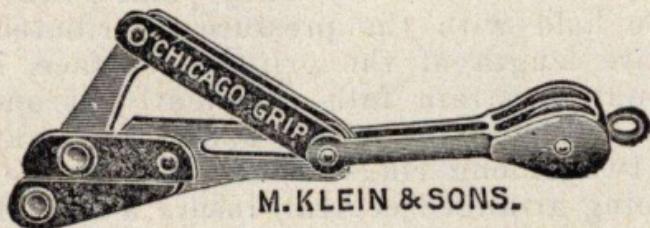
It is of vital importance to all having strand wire or trolley wire to handle, to investigate this grip.

Klein's "Chicago Grip"
FOR BARE COPPER OR IRON WIRE.
It Grips and Holds and is Most Convenient to Handle.



	List Price
No. 0358 for No. 10	wire and smaller, each. \$ 3.80
No. 358A for No. 6	wire and smaller, each. 4.00
No. 358C for No. 0	wire and smaller, each. 6.60
No. 358E for No. 0000	wire and smaller, each. 10.00

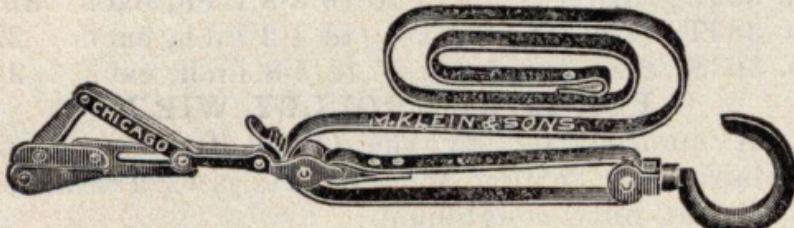
Klein's "Chicago Grip" With Pulleys



M. KLEIN & SONS.

No. 358 for No. 10	wire and smaller, each. \$ 4.80
No. 358B for No. 6	wire and smaller, each. 5.00
No. 358D for No. 0	wire and smaller, each. 7.60
No. 358F for No. 0000	wire and smaller, each. 11.50

Klein's "Chicago Lineman's Tool"



Single Purchase

No. 3358 for No. 10 wire and smaller, each..	\$ 10.50
No. 3358A for No. 6 wire and smaller, each..	11.00
No. 3358C for No. 0 wire and smaller, each..	13.50

Double Purchase

No. 3358R for No. 10 wire and smaller, each..	12.00
No. 3358S for No. 6 wire and smaller, each..	12.50
No. 3358T for No. 0 wire and smaller, each..	15.00

Klein's "Chicago Grip"
for Insulated Wire
 Will not slip or injure the Insulation



	List Price Each
No. 358G for No. 10	wire and smaller..... \$ 6.00
No. 358I for No. 4	wire and smaller..... 6.50
No. 358K for No. 00	wire and smaller..... 8.00
No. 358M for No. 0000	wire and smaller..... 10.00

Klein's "Chicago Grip" with Pulleys
 for Insulated Wire



No. 35 H for No. 10	wire and smaller..... \$ 7.00
No. 358J for No. 4	wire and smaller..... 7.50
No. 358L for No. 00	wire and smaller..... 9.00
No. 358N for No. 0000	wire and smaller..... 11.50

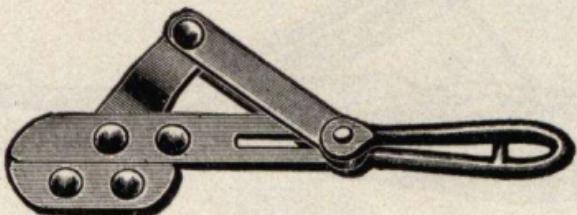
Klein's Chicago Lineman's Tool
 for Insulated Wire



Single Purchase	
No. 3358G for No. 10	wire and smaller..... \$13.00
No. 3358I for No. 4	wire and smaller..... 13.50
No. 3358K for No. 00	wire and smaller..... 14.50
Double Purchase	
No. 3358O for No. 10	wire and smaller..... 14.00
No. 3358U for No. 4	wire and smaller..... 15.00
No. 3358V for No. 00	wire and smaller..... 15.50

Buffalo Grips

FOR BARE COPPER OR IRON WIRE



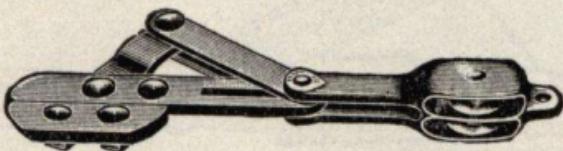
List Price

No. 3713, for No. 6 wire and smaller, each....	\$2.50
No. 3714, for No. 0 wire and smaller, each....	4.00
No. 3715, for No. 0000 wire and smaller, each..	6.00

Buffalo Grip with Pulleys

FOR BARE COPPER OR IRON WIRE

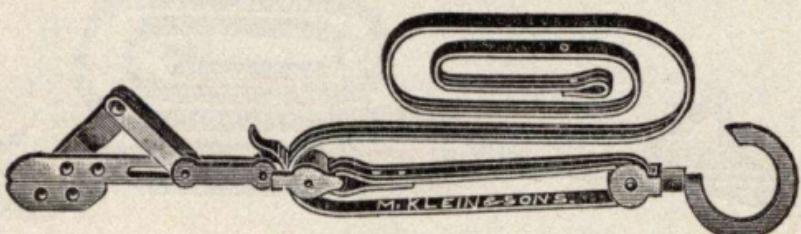
Pulleys Made for $\frac{3}{8}$ Inch Rope



No. 3713A, for No. 6 wire and smaller each ..	\$3.00
No. 3714A, for No. 0 wire and smaller each...	4.50
No. 3715A, for No. 0000 wire and smaller each	6.50

Buffalo Lineman's Tool

FOR BARE COPPER OR IRON WIRE



Single Purchase with Iron Fittings

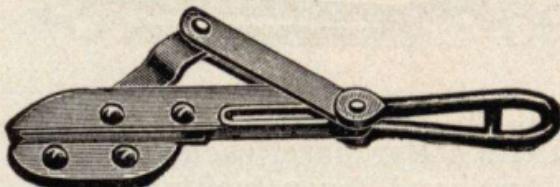
No. 3715M, for No. 6 wire and smaller, each..	\$5.00
No. 3715N, for No. 0 wire and smaller, each..	6.50

Double Purchase with Iron Fittings

No. 3715R, for No. 6 wire and smaller, each..	5.75
No. 3715S, for No. 0 wire and smaller, each..	7.25

B u f f a l o G r i p s

For Insulated Wire.



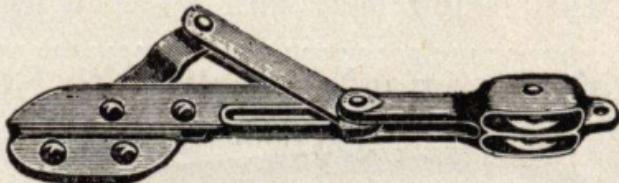
List Price

No. 3715B, .52-inch opening, each.....	\$4.00
No. 3715C, .68-inch opening, each.....	5.00

Buffalo Grip with Pulleys

For Insulated Wire.

Pulleys Made for $\frac{3}{8}$ Inch Rope



No. 3715F, .52-inch opening, each.....	\$4.50
No. 3715G, .68-inch opening, each.....	5.50

Buffalo Lineman's Tool

For Insulated Wire.



Single Purchase with Iron Fittings

No. 3715O, .52-inch opening, each.....	\$6.50
Double Purchase with Iron Fittings	

No. 3715T, .52-inch opening, each.....	7.25
--	------

Klein's Howes Wire Tool

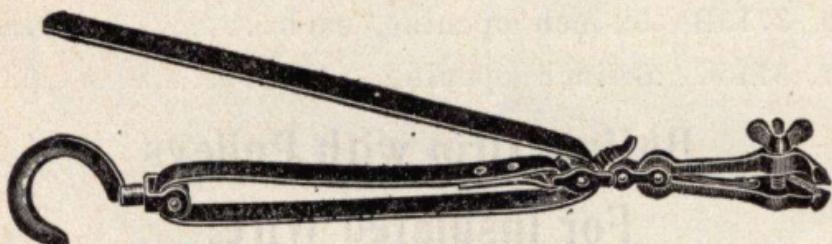


List Price

No. 481 Single Purchase, each.....	\$ 7.00
No. 481B Double Purchase, each.....	8.50

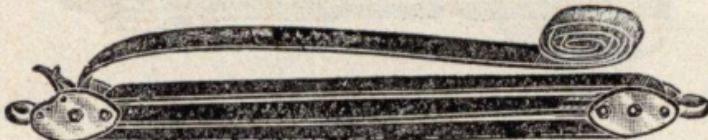
Arranged for attaching Grips.

Klein's Howes Wire Tool With Vise.



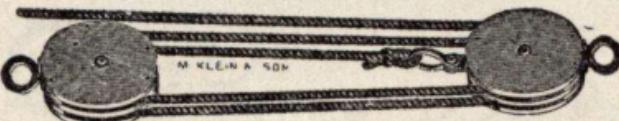
No. 481A Single Purchase with 5½ inch vise, each	\$ 9.00
No. 481C Double Purchase with 5½ inch vise, each	11.50

Klein's Lineman's Block With Strap



No. 480. Blocks with 12-foot strap.....	\$ 6.00
Arranged for attaching Grips.	

Klein's Lineman's WoodBlock With eye at Ends for Fastening Grips



No. 339A 3-inch blocks, for 7-16 inch rope, per pair.....	\$ 3.50
No. 339 4-inch blocks, for ½ inch rope, per pair	3.60
No. 340 5-inch blocks, for 5/8 inch rope, per pair	5.70

Also Other Styles

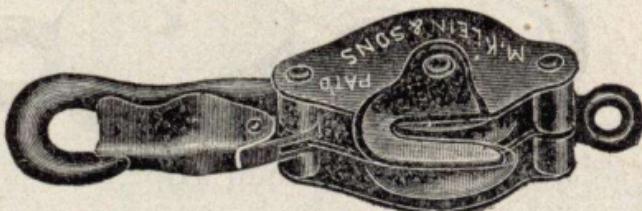
Self Locking Lineman's Slack Tackle



Weight	List Price
No. 479 A, Galvanized 2½ lbs., per set	\$5.50

Light Steel shell blocks, fitted with snubbing hook to lock load in any position. This is a great convenience and time saver for the man on the pole. Also in handling a vertical load. To lock the load, simply pull the luff rope under the hook. To release, simply pull the rope. The forward block is arranged with a snap hook with spring guard. It may be used as an ordinary block with hook or with a wire grip attached for handling wire. The back block is arranged with an anchor hook for fastening to an insulator pin, or other convenient anchorage. Furnished with 25 feet $\frac{3}{8}$ in. rope.

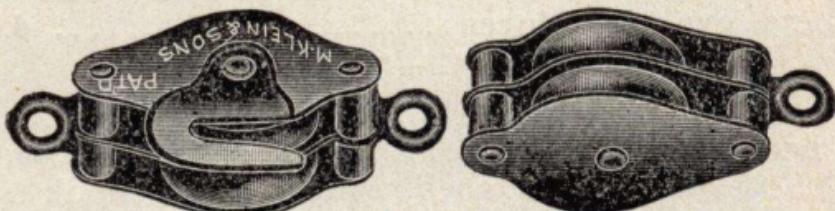
Self Locking Troubleman's Blocks



No. 479 B, Galvanized 2½ lbs.,.....per set \$5.50

This set is similar to above, but has a snap hook at each end for attaching grips, furnished with 25 feet $\frac{3}{8}$ in. rope.

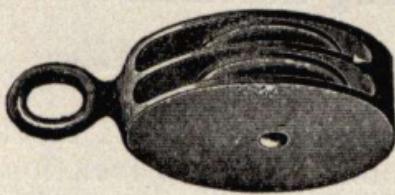
Self Locking Lineman's Eye Blocks



No. 479 C, Galvanized, 2 lbs. per set\$5.00

This set is similar to above, but has an eye at each end for attaching grips, furnished with 25 feet $\frac{3}{8}$ in. rope.

Galvanized Malleable Iron Pulley Blocks



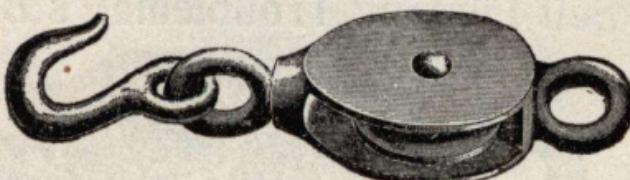
For $\frac{3}{8}$ -inch rope.

	List Price Per Dozen
No. 331, $2\frac{1}{4}$ -inch shell, single, one eye, ...	$\$2.00$
No. 331A, $2\frac{1}{4}$ -inch shell, single, two eyes, ...	2.00
No. 331B, $2\frac{1}{4}$ -inch shell, double, one eye, ...	2.80
No. 331C, $2\frac{1}{4}$ -inch shell, double, two eyes, ...	2.80

For $\frac{1}{2}$ -inch rope.

No. 332, 3-inch shell, single, one eye,	$\$3.00$
No. 332A, 3-inch shell, single, two eyes,	3.00
No. 332B, 3-inch shell, double, one eye,	4.00
No. 332C, 3-inch shell, double two eyes,	4.00

Galvanized Malleable Iron Pulley Blocks



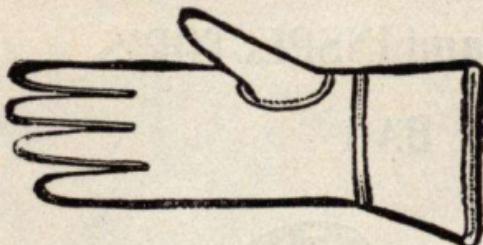
For $\frac{3}{8}$ inch rope.

	List Price
No. 2333, $2\frac{1}{4}$ -inch shell, single, with hook, per dozen	$\$3.75$
No. 2333A, $2\frac{1}{4}$ -inch shell, single, with hook and eye, per dozen.....	3.75
No. 2334, $2\frac{1}{4}$ -inch shell, double, with hook, per dozen	4.50
No. 2334A, $2\frac{1}{4}$ -inch shell, double, with hook and eye, per dozen.....	4.50

For $\frac{1}{2}$ -inch rope.

No. 2335, 3-inch shell, single, with hook, per dozen	$\$5.15$
No. 2335A, 3-inch shell, single, with hook and eye, per dozen.....	5.15
No. 2336, 3-inch shell, double, with hook, per dozen	6.00
No. 2336A, 3-inch shell, double, with hook and eye, per dozen.....	6.00

Lineman's Rubber Gloves



Size 13 to fit size
9 hand.

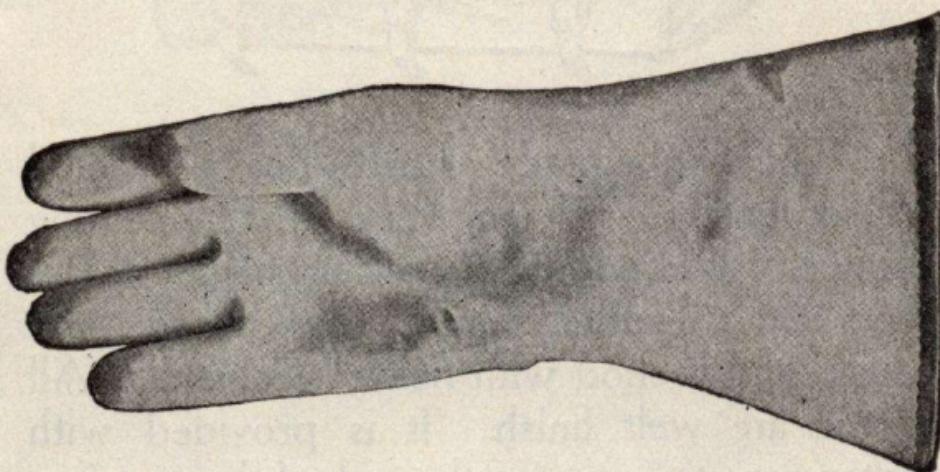
Size 14 to fit size
 $9\frac{1}{2}$ hand.

Size 15 to fit size
10 hand.

No. 58C. With Gauntlet. Palms and Fingers
Reinforced, per pair.....\$7.50

Electrician's Seamless Rubber Gloves

Pure Gum



To stand about 4,000 volts.

Any size from 9 to $10\frac{1}{2}$ hand.

No. 60. Per pair.....\$5.00

Special Lineman's Gloves, Pure Gum

Heavier in material than No. 60—will stand higher voltage. About 10,000 volts.

Any size from 9 to $10\frac{1}{2}$ hand.

No. 61. Per pair..... 6.50

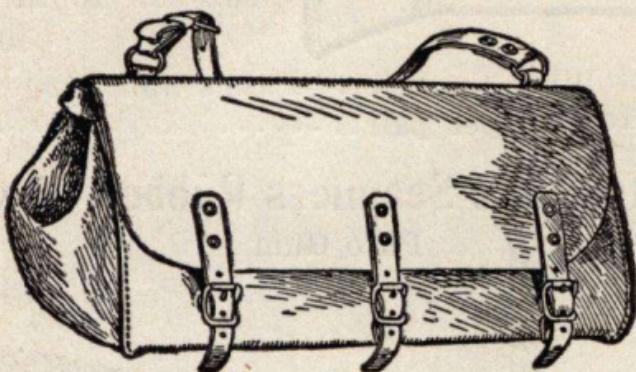
These Gloves run in hand sizes from 9 to $10\frac{1}{2}$, varying by half sizes.

Note—The factories do not guarantee the resistance against any voltage. Gloves should be tested before using and if they do not stand up to the voltage ascribed will be exchanged for others under the same terms, but in no instance will allowance be made for transportation either way.

There are two types of climbers in use, the Western or goose neck type and the Eastern type. The former is not now in as extensive use but is well liked by troublemen for occasional climbing on account of their lightness. For continuous use the Eastern pattern is generally preferred, as this type affords a wider standing surface and is more comfortable in continuous use, and is considered safer also, because the gaff is set higher up in the shank and can therefore be made longer. This type is furthermore made in two styles differing not in quality at all, only, in the No. 381 style the loops through which the fastening straps pass are made with an inserted staple of round material, riveted through the metal of the bar; the staple being round is not so apt to chafe the strap and is preferred by some linemen on that account. The No. 381-L is the same in construction, only, the bar or shank is made extra light, therefore, not quite so heavy as the regular No. 381. For men light in weight this type is preferred; we do not believe it safe however, to make them longer than 16½ inches. The No. 382 differs from the above types in this; the strap loop is punched, or formed, out of the metal of the shank. This manner of making entails less work and this type is, therefore, cheaper in price on this account, but, as the inner surface of the loop is necessarily flat with square corners, it is thought by some to wear harder on the strap. This type is not made in the extra light weight for the reason that the metal would be too thin to allow the forming of an efficient loop.

The gaff is tool steel, riveted into the shank hot, it is then ground and filed to shape and hardened and drawn to the proper temper.

KLEIN'S
ELECTRICIAN'S and INSPECTOR'S
TOOL BAG



This bag is made of extra heavy selected russet leather, and is a very neat appearing article. The bottom is built up of one thickness each leather, heavy strawboard, and duck, and is shod with heavy steel studs. All seams are welt finish. It is provided with extension straps across the ends of the opening, so as to permit its being widened up when additional room is required. It has three retaining straps on the flap, and two extra strap loops riveted on the back for carrying a saw, bell hangers bit, etc. It is also provided with shoulder strap for carrying.

MADE IN THE FOLLOWING SIZES

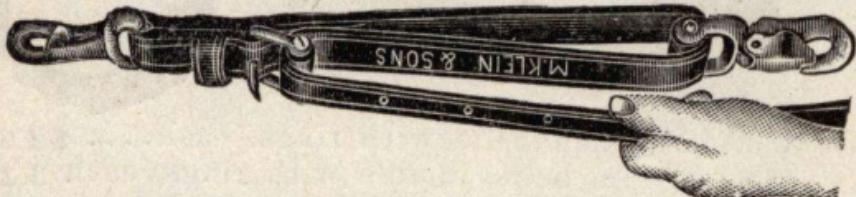
	List Price
No. 393R—16 inch, each	\$10.40
No. 393S—20 inch, each	11.20
No. 393T—24 inch,	12.00

"MULTIUSE"

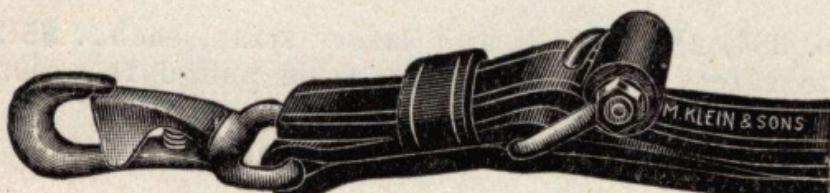
Combined Safety and Slack Strap



Showing use as Safety Strap ready to hook into rings on tool belt



As Slack Strap. Grip to be hooked into snaps at either end or one end may be used as anchor hook



Showing detail of Roller Buckle. End of strap locked in position for use as safety strap

THIS is a unique and useful idea. Every Lineman is now regularly equipped with a safety belt so as to secure himself in his position when it is necessary to work free handed on the pole. The ordinary safety belt of course serves this purpose satisfactorily, however, as it frequently happens that the Lineman finds it necessary, in the course of his duties, to use comealongs and pull up slack wires, he will find the Combined Safety and Slack Strap a convenient and useful device that will answer both purposes. The cut shows the strap as used for a safety strap, the enlarged cut shows the combination roller buckle and cut No. 2 shows the strap as used to pull slack. It will be noticed that the free snap is of the roller type, and the free end of the strap is guided over the roller of the combination buckle, making it a powerful double purchase pulling device. By throwing the tongue of the buckle into any of the holes along the surface of the strap, the load can be held at any desired position.

Size extended $1\frac{3}{4}$ " wide and 7 feet long from tip to tip.

Can be furnished by itself or together with regular tool belt.

	List Price
No. 385T Safety Strap only.....	\$5.00

With Tool Belt No. 383A.....	7.50
------------------------------	------

LINEMEN'S POLE CLIMBERS.

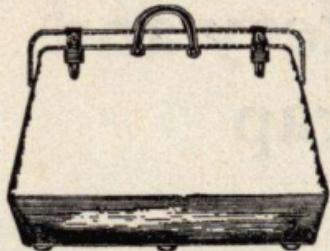
Sometimes called "Spurs."

The importance of considering safety in linemen's pole climbers is obvious when we take in view the fact that a man going up a pole must depend entirely on his spurs for safety, not only that they give a firm foothold while climbing, but as much of his work is done standing in them, he has at times to use both hands in his work, and then must depend entirely on his spurs and safety strap for support; therefore, climbers must possess in the highest degree all those qualities that tend toward safety in material and in workmanship, besides, comfort is another point to be considered, because, the man's entire weight, for extended periods, is impinged upon the sole of the foot; with considerable pressure upon the inside of the lower portion of the legs and bad fitting spurs are therefore, as intolerable as bad fitting shoes. The spur or gaff, as may be readily imagined, is one of the important features and the shape, set of angle, temper and fixidity in the shank of the bar are points very essential in construction, not alone for safety but also for ease and comfort. The shank must possess flexibility to yield to the pressure of the leg so as not to chafe, and yet to come back to its normal shape on release from pressure especially in coming down a pole, which linemen are accustomed to do in drops of four to five feet at a step which throws the entire weight of the body on one spur with tremendous force.

All these essential points are closely considered in making up of Klein Climbers and their fitness is recognized by linemen in general.

Lineman's Canvas Tool Bag, W.U. Pattern

Equipped with leather handles, sides and bottom

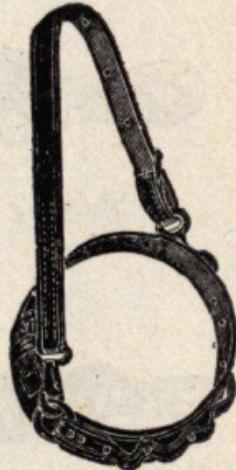


List Price

No. 393A	12 inch, each.	\$4.50
No. 393J	14 inch, each..	4.70
No. 393E	16 inch, each..	4.90
No. 393I	18 inch, each..	5.20
No. 393	20 inch, each..	5.60
No. 393H	24 inch, each..	6.50

We can furnish all leather tool bags any style

Lineman's Tool Belts



No. 383A	2 1/4 inch belts with rings, each.....	\$2.50
No. 383C	2 1/4 in. belts, double with rings, each	3.20
No. 383E	3 1/2 inch belts with rings, each.....	3.00

Note. When ordering belts please state if wanted for 38, 40, 42, 44 or 46-inch waist.

Lineman's Belt and Safety Strap

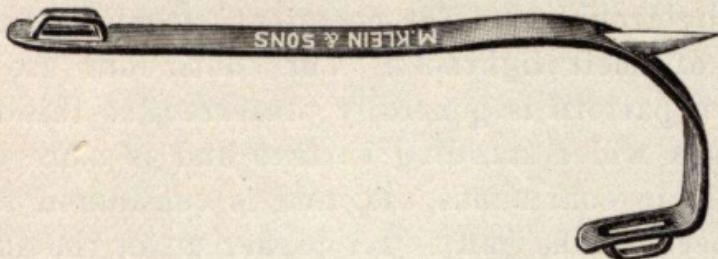
No. 384,	2 1/4 in. belt and safety strap, each...	\$5.50
The safety strap is 1 3/4 in. wide and 6 feet long.		

Lineman's Safety Strap

No. 385	1 3/4 in. by 6 ft. with japanned snap.	\$3.00
No. 385R	1 3/4 in. by 6 1/2 ft. with roller snap...	3.20
No. 385S	1 3/4 in. by 6 1/2 ft., swivel roller snap.	4.00
No. 386	2 in. by 6 ft. with roller snap.....	3.60
No. 386B	2 in. by 6 ft. with japanned snap....	3.40

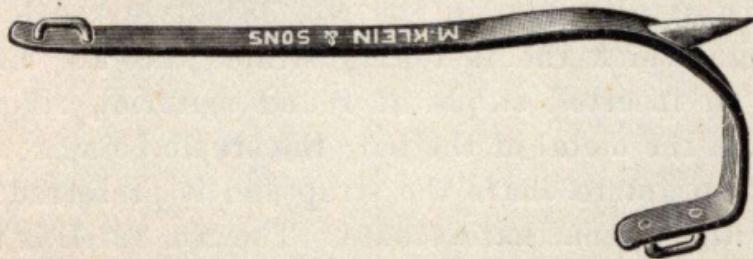
Klein's Eastern Climbers

NOTE—In ordering climbers, always mention the length wanted. Lengths from 14 to 19 inches varying by half inch.



List Price.

No. 382 Punched Loop. Per pair.....\$4.00



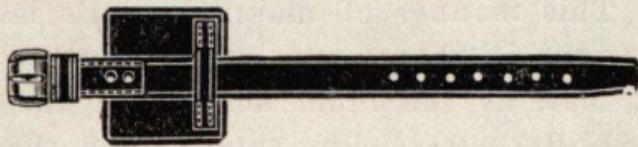
No. 381 Riveted Loop. Regular. Per pair.\$4.50

No. 381L Riveted Loop. Special light weight.

Per pair 4.50

NOTE—The No. 381L are made in lengths only from 14 to 16½ inches, by half inch variation.

Straps for Eastern Climbers



No. 382A Per set.....\$2.30

The set consists of two upper straps with 4x4 plain leather pads and two lower straps, as shown in cut.

No. 382B. Per set.....\$3.20

Same as above, with sheep-lined pads.

No. 382C. Per set..... 3.20

Same as above, with felt-lined pads.

Assembler's Screw Driver



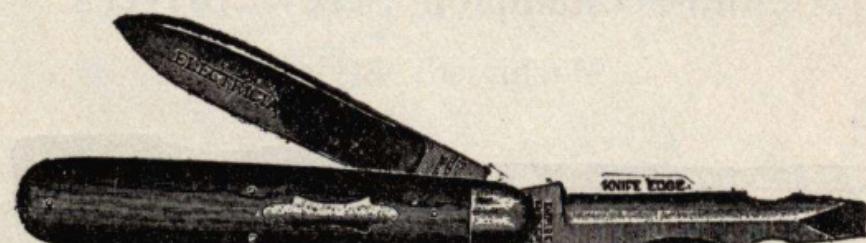
List Price

No. 671B	fits screw Nos. 1 to 4, nickel plated, each	\$0.50
No. 672	" " " 3 to 5, polish finish "....	.70
No. 673	" " " 5 to 7, " " " "....	.70

A wonderfully convenient tool for all assemblers and adjusters using light screws.

The swivel button rests in the palm of the hand, and the knurled body is turned with the fingers while the screw runs easily, then firmly grasped to tighten.

Electrician's Knives

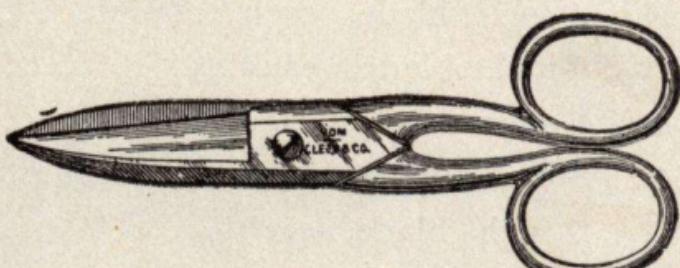


PRESSING TOP OF LARGE BLADE UNLOCKS SCREW-DRIVER BLADE.

LOCKED WHEN OPEN.

No. 401	Single Blade, each.....	\$1.10
No. 402	Double Blade, each	1.50

Electrician's Scissors



No. 400	Nickel Plated, each.....	\$1.00
---------	--------------------------	--------

Genuine Champion Screw Drivers

Cabinet Style.



The Cabinet Screw Driver has a light handle and slender blade, adapted for light work.

List Price.

No. 646,	2½-inch blade, each.....	\$0.35
No. 646A,	3½-inch blade, each.....	0.40
No. 647,	4½-inch blade, each.....	0.45
No. 647A,	5½-inch blade, each.....	0.65
No. 648,	6½-inch blade, each.....	0.75
No. 649	8½-inch blade, each.....	0.95
No. 650	10½-inch blade, each.....	1.05
No. 651	12½-inch blade, each.....	1.30

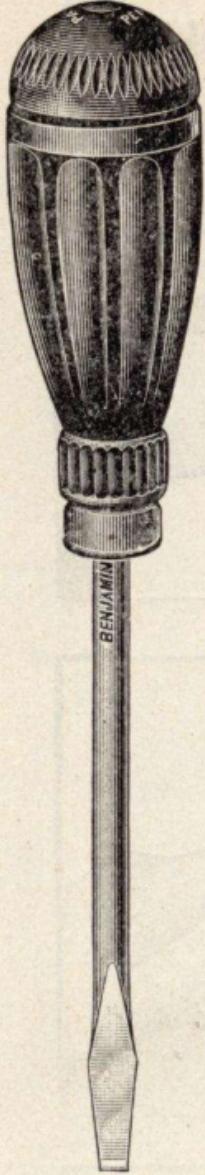
Genuine Champion Screw Drivers

Machinist's Style.



The Machinist's Screw Driver is intended for heavier work.

No. 640	2½-inch blade, each.....	\$0.35
No. 641A,	3-inch blade, each.....	0.40
No. 641	4-inch blade, each.....	0.50
No. 642A,	5-inch blade, each.....	0.60
No. 642	6-inch blade, each.....	0.70
No. 643A,	7-inch blade, each.....	0.80
No. 643	8-inch blade, each.....	1.00
No. 644A,	9-inch blade, each.....	1.10
No. 644	10-inch blade, each.....	1.20
No. 645	12-inch blade, each.....	1.40



Benjamin Friction Screw Driver

Rotating Cap moves with the hand.

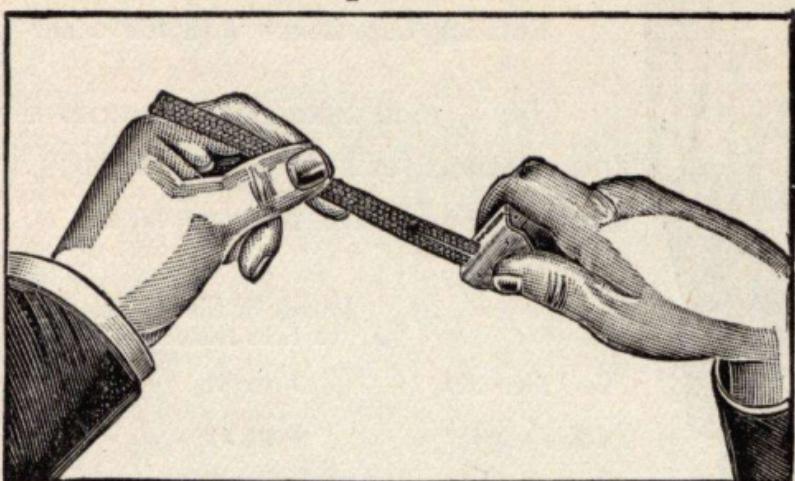
The $\frac{3}{16}$ inch Size has a slender blade and adapted for light work. The $\frac{1}{4}$ inch size is intended for heavier work.

	Length of Blade $\frac{3}{16}$ Inch Diameter	List Price
No. A330	3 inch	\$.60
No. A340	4 inch	.70
No. A350	5 inch	.80
No. A360	6 inch	.90
No. A380	8 inch	1.00

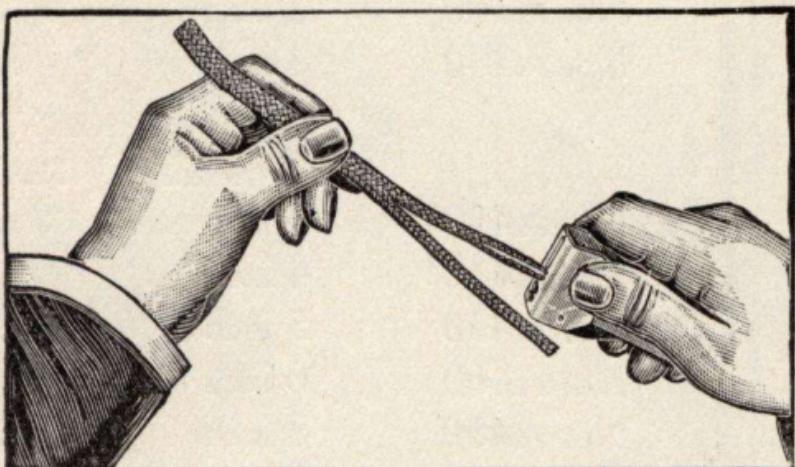
	Length of Blade $\frac{1}{4}$ Inch Diameter	Net Price
No. A430	3 inch	\$.70
No. A440	4 inch	.80
No. A450	5 inch	.90
No. A460	6 inch	1.00
No. A480	8 inch	1.10

The Benjamin Friction Drive Screw Driver is guaranteed to be the highest quality in every detail. Only high grade crucible steel is used and the blade is carefully forged, tempered, polished and inspected before shipment. The handle is black insulating material, moulded to the blade, making them practically one solid piece.

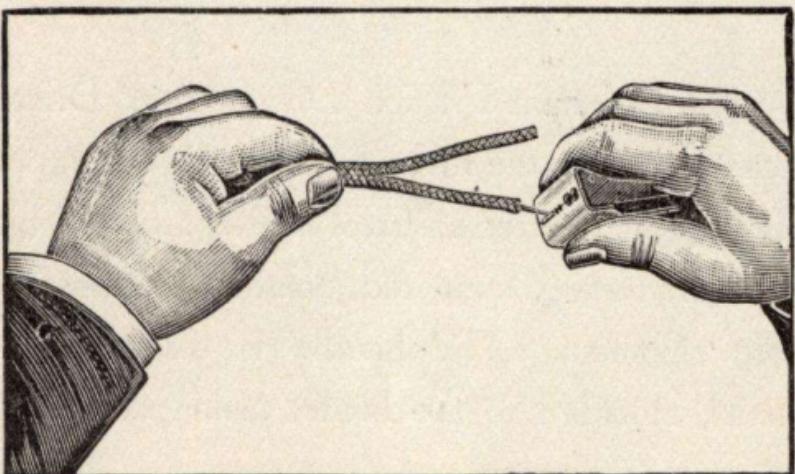
Illustrations of P. & G. wire skinner in operation.



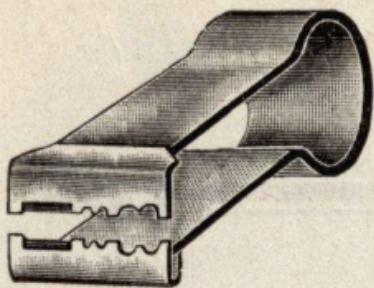
No. 1.



No. 2.



No. 3.



P. & G. Wire Skinner

Practical Handy
Inexpensive

For Electricians, Linemen, Telephone Men,
Fixture Men,
Chauffeurs, Wiremen
etc.

Weight $3\frac{1}{2}$ oz.
 $\frac{1}{3}$ Actual Size.
Finish—Nickel or
Oxidized Copper.

No. 3378. List price.. \$1.50

Removing insulation from a wire with a knife is not only slow and tedious, but it is dangerous. The knife frequently slips, cutting the hand and often nicks the wire, weakening the connection.

The P. & G. Wire Skinner is designed to fill the long felt want for a quick-acting wire skinner. This device splits the outer insulation on a duplex wire by one pull, leaving the braid adhering to the inner wires as shown in cut No. 1.

Another stroke of the tool, using the middle teeth, splits the insulation on the single wire, lengthwise, without damaging the wire, leaving it ready for scraping. See cut No. 2.

Cut No. 3 shows the act of removing the insulation from the wire by using the scraper, leaving it perfectly clean and ready for soldering, and doing away with the use of a knife in any of the operations.

It is the only tool that will remove the outer braid from B. X., which is done by letting the hand rotate with the lay of the wires, and making two cuts, removing the braid from the lower end first.

It will remove the braid and insulation from lamp cord with one pull, by using the small or middle teeth, and not mar a single wire. It can be used on various sized wires, from the small up to No. 4, either single or stranded, removing the insulation in one-third of the time it now takes with a knife, besides doing the work better and neater.

Double Spur Auger Bit



	Sizes in 16ths	List Price Per Doz.
No. 260 B	3.....	\$ 4.50
No. 260	4.....	4.00
No. 260 A	5.....	4.00
No. 261	6.....	4.00
No. 261 A	7.....	4.50
No. 262	8.....	5.00
No. 262 A	9.....	5.50
No. 263	10.....	6.00
No. 263 A	11.....	7.00
No. 264	12.....	7.00
No. 264 A	13.....	8.00
No. 265	14.....	8.00
No. 265 A	15.....	9.00
No. 266	16.....	9.00

A high grade, perfect finish bit for general work with improved convex twist. Large clearance, strongly backed lips and spurs. True sizes, thorough finish and perfect temper. Unequaled by any ordinary Auger Bit made.

Double Spur Car Bit



	Sizes in 16ths	List Price Per Doz.
No. 270	4.....	\$ 9.00
No. 271	5.....	9.00
No. 272	6.....	9.00
No. 273	7.....	10.00
No. 274	8.....	11.25
No. 275	9.....	12.50
No. 276	10.....	13.75
No. 277	11.....	15.00
No. 278	12.....	16.25
No. 279	13.....	17.50
No. 280	14.....	19.00
No. 281	15.....	20.50
No. 282	16.....	22.00
No. 283	17.....	24.00
No. 284	18.....	26.00
No. 285	19.....	28.00
No. 286	20.....	30.00

Forged from selected steel with extra stiff twist. Easy clearance, strong lips and perfect temper. Highly polished, true to size and well tapered.

Solid Center Auger Bit



Double Cutter.

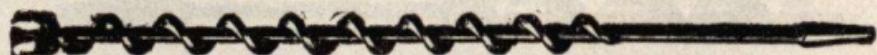
Extension Lip

	Sizes in 16ths	List Price Per Doz.
No. 880	3.....	\$ 4.50
No. 881	4.....	4.00
No. 882	5.....	4.00
No. 883	6.....	4.00
No. 884	7.....	4.50
No. 885	8.....	5.00
No. 886	9.....	5.50
No. 887	10.....	6.00
No. 888	11.....	7.00
No. 889	12.....	7.00
No. 890	13.....	8.00
No. 891	14.....	8.00
No. 892	15.....	9.00
No. 893	16.....	9.00

These bits are made of extra high grade special crucible auger bit steel. They are finished in first class style and each bit is fully warranted.

Owing to the fact that, these bits have but one crimp, it is impossible for them to choke, as the clearance is double. No pressure is required in boring and they will bore either in end or side of wood. They are the only bits made having a solid center and are therefore much stronger and will bore much more rapidly than any other style

Solid Center Car Bit.



Double Cutter Extension Lip

12 in. Twist, 6 in. Shank, Total length, 18 in.

	Sizes in 16ths	List Price Per Doz.
No. 820	4.....	\$ 9.00
No. 821	5.....	.9.00
No. 822	6.....	9.00
No. 823	7.....	10.00
No. 824	8.....	11.25
No. 825	9.....	12.50
No. 826	10.....	13.75
No. 827	11.....	15.00
No. 828	12.....	16.25
No. 829	13.....	17.50
No. 830	14.....	19.00
No. 831	15.....	20.50
No. 832	16.....	22.00
No. 833	17.....	24.00
No. 834	18.....	26.00
No. 835	19.....	28.00
No. 836	20.....	30.00

These bits are made of extra high grade special crucible auger bit steel. They are finished in first class style and each bit is fully warranted.

Owing to the fact that, these bits have but one crimp, it is impossible for them to choke, as the clearance is double. No pressure is required in boring and they will bore either in end or side of wood. They are the only bits made having a solid center and are therefore much stronger and will bore much more rapidly than any other style

Ship Auger Bits with Screw



	Sizes in 16ths	List Price Per Doz.
No. 840	4.....	\$ 6.00
No. 841	5.....	6.00
No. 842	6.....	6.00
No. 843	7.....	6.00
No. 844	8.....	6.00
No. 845	9.....	7.50
No. 846	10.....	7.50
No. 847	11.....	9.00
No. 848	12.....	9.00
No. 849	13.....	10.50
No. 850	14.....	10.50
No. 851	15.....	12.00
No. 852	16.....	12.00
No. 853	17.....	13.50
No. 854	18.....	13.50
No. 855	19.....	15.00
No. 856	20.....	15.00

Adapted for special or difficult work of any sort. Guaranteed to bore straight and to be exact in size. Recommended for hard, knotty or end grain wood. A durable, serviceable and easy working Auger Bit.

Ship Auger Car Bits, with Screw



	Sizes in 16ths	List Price Per Doz.
No. 860	6.....	9.00
No. 861	7.....	9.50
No. 862	8.....	10.00
No. 863	9.....	10.50
No. 864	10.....	11.00
No. 865	11.....	11.50
No. 866	12.....	12.00
No. 867	13.....	12.50
No. 868	14.....	13.00
No. 869	15.....	14.00
No. 870	16.....	14.50
No. 871	17.....	15.50
No. 872	18.....	16.00
No. 873	19.....	17.00
No. 874	20.....	17.50
No. 875	21.....	18.50
No. 876	22.....	19.00
No. 877	23.....	21.50
No. 878	24.....	22.00

The most popular type of bit for car builders use. Works easily and bores true in any kind of wood. Adapted for cross grain, angular or end boring. Of superior stock, exact size and high finish.

Expansive Bits



List Price

No. 267 Small Size, with two cutters, each..... \$1.35
one from $\frac{1}{2}$ to $\frac{7}{8}$, one from $\frac{7}{8}$ to $1\frac{1}{2}$ inch.

No. 268 Large Size, with two cutters, each..... 2.00
one from $\frac{7}{8}$ to $1\frac{3}{4}$, one from $1\frac{3}{4}$ to 3 inch.

Electricians' Gimlet or Feeling Bit

With Wood Handle

No. 730 Series.

Hammer forged from crucible steel. Carefully tempered. Very quick boring bit made only in the following sizes 3-16— $1\frac{1}{4}$ —5-16 and $\frac{3}{8}$ in.

List Price Per Doz.

12 in. lengths	\$5.00
18 " "	6.50
24 " "	8.00
30 " "	9.50
36 " "	11.00

Electricians' Gimlet Bits

For Use In Bit Brace

No. 740 Series.

Made in the following sizes and lengths as above prices same as numbers 730 Series.

NOTE:—When ordering please mention size, style and length wanted.

No. 740

No. 730

Bell Hangers' and Electricians' Drills

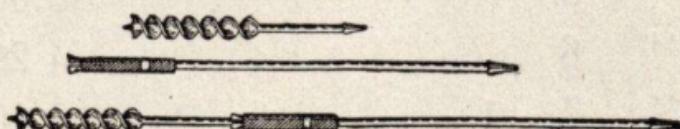


The numbers indicate the size in 32nds.

Use number and length in ordering these drills.

No.	12-INCH Per Dozen.	18-INCH Per Dozen.	24-INCH Per Dozen.	30-INCH Per Dozen.	36-INCH Per Dozen.
6....	\$5.00	\$7.00	\$9.00	\$11.00	\$13.00
8....	5.00	7.00	9.00	11.00	13.00
10....	5.50	7.50	9.50	12.00	13.00
12 ...	6.00	8.00	10.00	12.00	13.00
14....	7.00	9.00	11.00	13.00	14.00
16....	8.00	10.00	12.00	14.00	15.00
18....	9.00	11.00	13.00	15.00	16.00
20....	10.00	12.00	14.00	15.00	16.00
22....	11.00	13.00	15.00	16.00	17.00
24....	12.00	14.00	16.00	17.00	18.00

Extension Bit Holders



3A	12 inches, each.....	\$2.20
3B	16 inches, each.....	2.20
3C	20 inches, each.....	2.30
3D	24 inches, each.....	2.40
3E	30 inches, each.....	2.50

This extension holds any size bits up to 1 inch. Will follow a $\frac{1}{8}$ bit or larger into the hole. Consists of a steel rod on the end of which is formed a socket. Steel jaws to hold the bits and a milled sleeve to tighten bits into jaws. Used by electricians and bell hangers to drill long holes when wiring through joists.

Hollow Brick Drill Heads



Any length pipe can be connected to these Drill Heads. You always have a drill. For Plumbers, Gas Fitters, Electricians, Awning Hangers, Stone Masons, Etc.

Made in the Following Sizes

Drill Head	Size Pipe for Handle	Diameter of Hole	Price per Doz.
No. 2	$\frac{1}{8}$ in.	9-16 in.	\$ 3.00 Net
" 3	$\frac{1}{4}$ "	11-16 "	3.00
" 4	$\frac{3}{8}$ "	$\frac{7}{8}$ "	3.00
" 5	$\frac{1}{2}$ "	1 "	3.00
" 6	$\frac{3}{4}$ "	$1\frac{1}{4}$ "	4.20
" 7	1 "	$1\frac{1}{2}$ "	9.00
" 8	$1\frac{1}{4}$ "	$1\frac{7}{8}$ "	12.00
" 9	$1\frac{1}{2}$ "	$2\frac{1}{4}$ "	18.00
" 10	2 "	$2\frac{3}{4}$ "	27.00
" 11	$2\frac{1}{2}$ "	$3\frac{1}{4}$ "	36.00
" 12	3 "	4 "	48 00

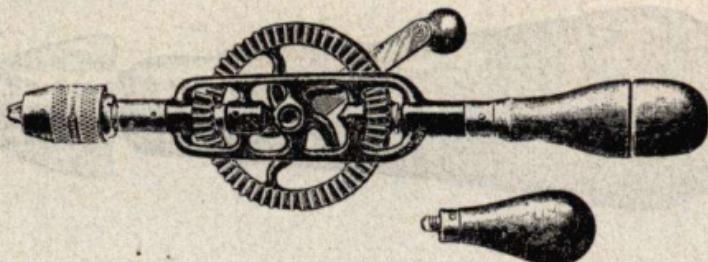
Sizes up to No. 6, packed 1 Doz. in a Box.

Larger Sizes packed $\frac{1}{2}$ Doz. in a Box.

Also put up in sets of three each of Heads No. 2, 3
4, 5. Price per set \$3.00 net.

Hand Drill

Three Jaw Chuck. Cocobola Handle.



No. 3F.

List Price.

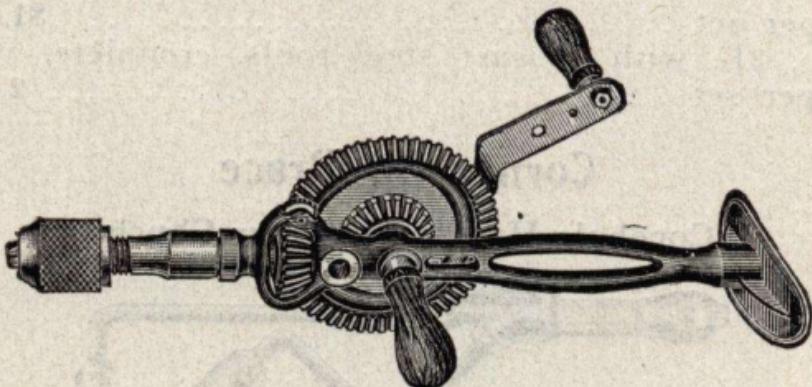
No. 3F, each..... \$3.50

Furnished with 6 drills, from 1-16 to 9-64 inch;
length overall, 10½ inches.

No. 4F, each..... 5.50

Furnished with 6 drills, from 1-16 to 9-64 inch;
Length overall, 12½ inches.

Breast Drills



No. 6F.

No. 6F, single speed, each..... \$7.50

This drill is fitted with three jaw chuck.

No. 2F, single speed, each..... 5.50

This drill is fitted with two jaw chuck. Same
style as No. 6F.

No. 1F, double speed, each..... \$8.00

This drill is fitted with two jaw chuck.

No. 5F, double speed, each..... 10.00

This drill is fitted with three jaw chuck. Same
style as No. 1F.

Hollow Handle Tool Sets

Cocobola Handle.



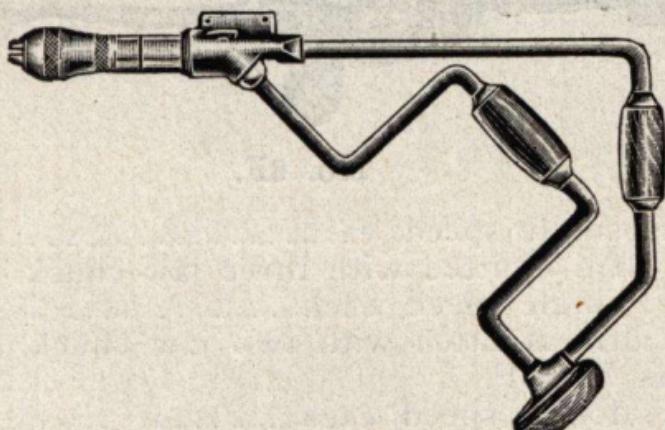
No. 4F.

List Price.

No. 4F, with 10 cast steel tools, complete per set	\$1.00
No. 2B, with 9 cast steel tools, complete, per set	2.00

Corner Bit Brace

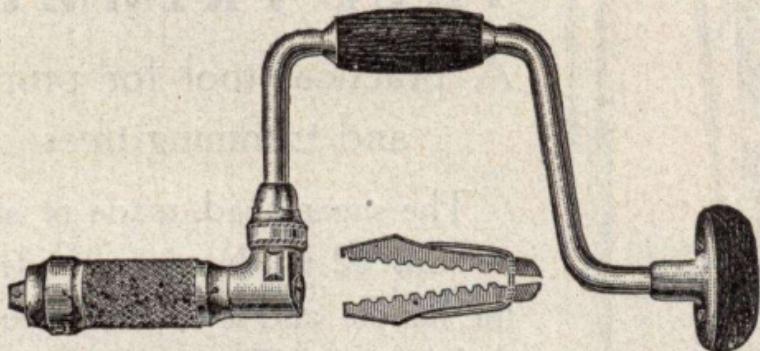
Cocobola Handles. Barbour Chuck.



No. 585, 8-inch sweep, each.....	\$6.00
No. 586, 10-inch sweep, each.....	6.50
Nickel plated and polished. Universal dust proof joint. Handy brace for all-round work.	

Ratchet Bit Braces

Nickel Plated, Barbour Chuck.

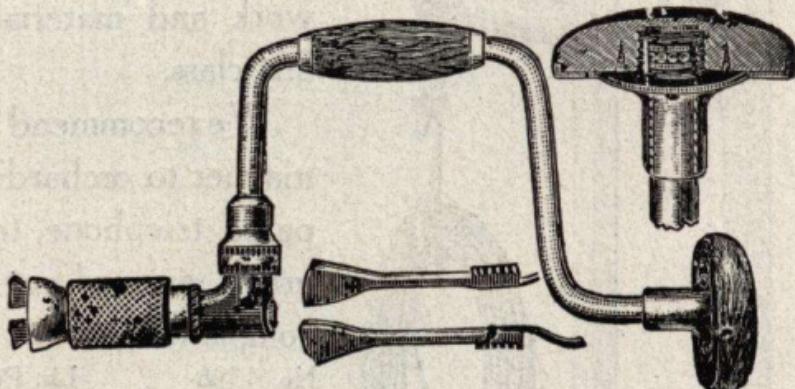


No. 62F, 6-inch sweep, each.....	\$2.40
No. 82F, 8-inch sweep, each.....	2.50
No. 102F, 10-inch sweep, each.....	2.70
No. 122F, 12-inch sweep, each.....	3.00
No. 142F, 14-inch sweep, each.....	3.20

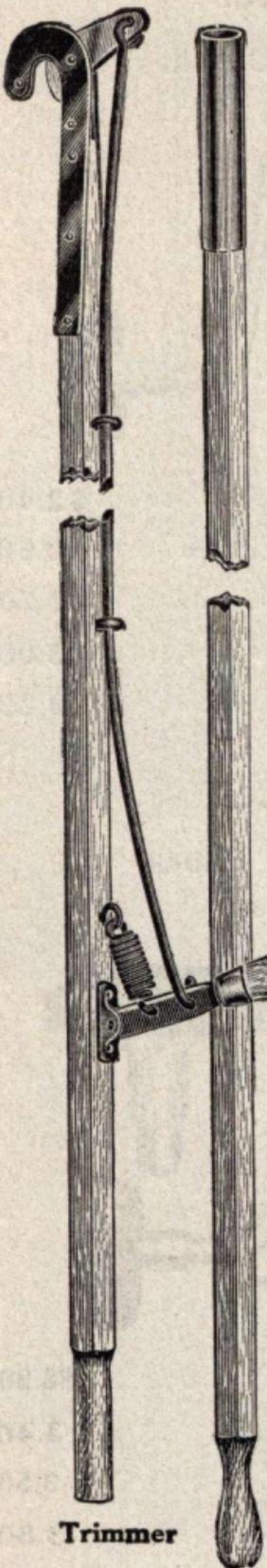
Ratchet Bit Braces

Nickel Plated, Automatic Chuck.

Ball Bearing Heads.



No. 66F, 6-inch sweep, each.....	\$3.20
No. 86F, 8-inch sweep, each.....	3.40
No. 106F, 10-inch sweep, each.....	3.50
No. 126F, 12-inch sweep, each.....	3.80
No. 146F, 14-inch sweep, each.....	4.00



"KLEIN'S PRUNAX" TREE TRIMMER

A practical tool for pruning and trimming trees

The shear head, made of steel, extends 12 in. down two sides of the handle and is riveted through and through. The handle is $1\frac{1}{8} \times 1\frac{1}{8}$ square edges rounded.

The actuating level is controlled by a spiral spring and carries a clevis at the end to which a rope may be attached by which the level is operated when the trimmer extension handle is used. The length of the trimmer is 8 ft. and with extension 18 ft. All work and material is first class.

We recommend the trimmer to orchardists, parks, telephone, telegraph and electric companies.

No.	List Price
1396	
8 ft. trimmer\$5.00
1397	
with extention	
and rope.....	\$7 00

Trimmer

Extension Handle

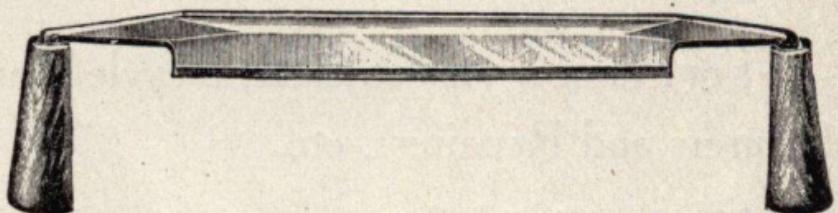
Socket Framing Chisel



List Price

No. 542.	1 -inch, each.....	\$1.50
No. 543.	1½-inch, each.....	1.80
No. 544.	2 -inch, each.....	2.20

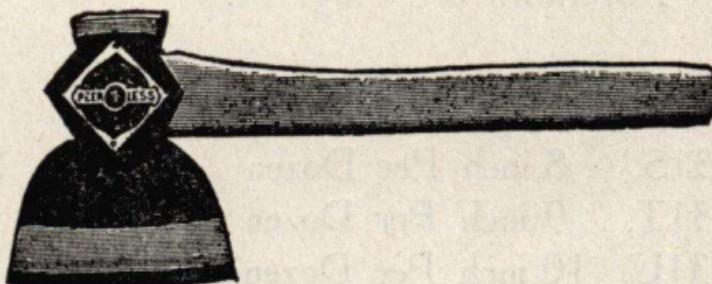
Heavy Lineman's Draw Knife



No. 540.	12-inch, blade each.....	\$3.00
	length 20½ inch over all.	
No. 541.	14-inch, blade each.....	3.50
	length 22½ inch over all.	

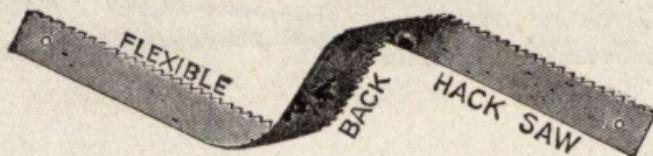
Lineman's Hand Axe

DOUBLE BEVEL BIT



No. 530A.	4-inch, each.....	\$1.40
No. 530B.	5-inch, each.....	1.80
No. 530C.	6-inch, each.....	2.20

The "CULLEY" Flexible Hack Saw Blade



This blade will actually cut flexible conduit and insulated cables—and do the job well. It is the most practicle blade an electrician can have in his tool kit.

For Plumbers, Electricians, Bicycle Manufacturers and Repairers, etc.

Used principally for cutting Brass, Tubing, Stringy Metals etc.

Not intended for use on Cast Steel, or such hard metals.

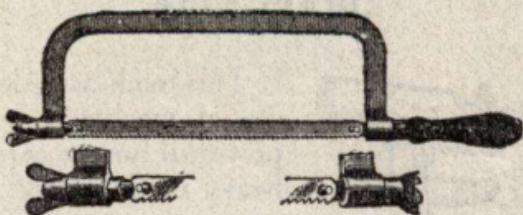
They will not break or shell teeth in use. For hand use only.

Made in the Following Sizes.

No. 31S.	8 inch Per Dozen	\$.70
No. 31T.	9 inch Per Dozen75
No. 31U.	10 inch Per Dozen85
No. 31V.	12 inch Per Dozen	1.00

NOTE—Regular blades have 16 teeth per inch Fine blades (for tubing) have 24 teeth per inch.

Solid Steel Hack Saw Frames



Nickel Plated and Polished Black Enamel Handle

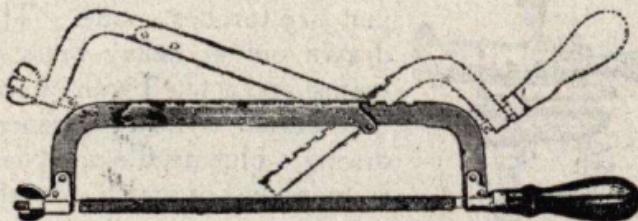
Blade can be faced in four different ways.

Furnished each with blade.

List Price.

No. 20A	8-inch, each.....	\$1.00
No. 20B	9-inch, each.....	1.10
No. 20C	10-inch, each.....	1.20
No. 20D	12-inch, each.....	1.40
No. 20E	14-inch, each.....	1.60

Improved Extension Hack Say Frames



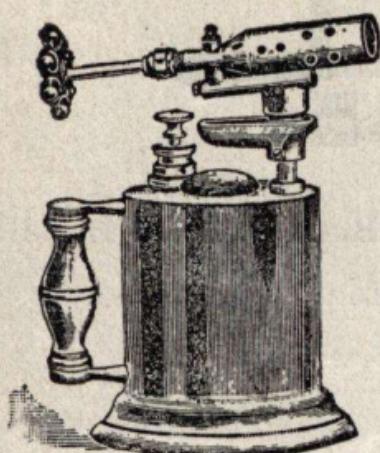
No. 50A. Price with blade, each.....\$1.50

Finest and most serviceable frame made.

Made of high grade steel, nickel plated, heavily and highly polished. Takes in blades from 8 inches to 12 inches, inclusive. Blade is adjustable and can be faced four different ways. Handle black enamel.

Gasoline Blow Torches

Quart Size.



This torch was designed for the use of mechanics who desired a powerful burner capable of doing heavy work out of doors in cold or windy weather. It will produce a clear, blue, intensely hot flame which is under perfect control of the operator, and is economical in the use of gasoline. The tank is quart size, drawn out of heavy brass, free from seams, and all fittings are heavy. Reinforcements are used to make an extra

strong tank. A brass air pump of the latest design screws into the tank and is submerged in gasoline, which aids in keeping it cool and protects it from injury. It is supplied in polished brass.

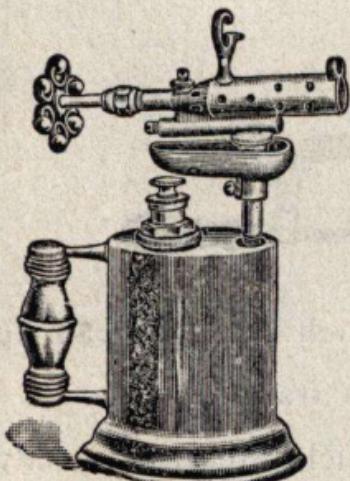
List Price

\$8 00

No. 3232 with soldering attachment.....

No. 3131 without soldering attachment..... 7.50

Pint Size.



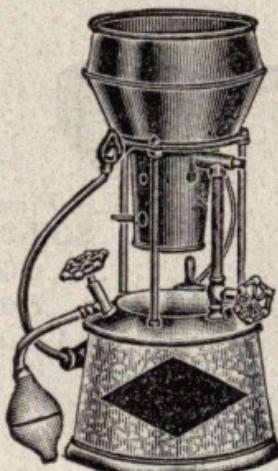
Is without question one of the best pint size torches made. The tank is drawn out of heavy brass, free from seams, and is fitted with our best pump. The burner is a strong generator, producing a blue needle point flame which is intensely hot and is not affected by wind or zero weather; is also fitted with hook and support for holding soldering coppers, which adds to its usefulness. Do not overlook the fact that you buy gasoline often and pay good money for it. The No. 38

Torch will save the user its cost in a short time in the saving of gasoline alone. It is well made, light, strong, well balanced, easy to handle and always ready for use.

No. 3838 with soldering attachment..... \$7.00

No. 3737 without soldering attachment..... 6.50

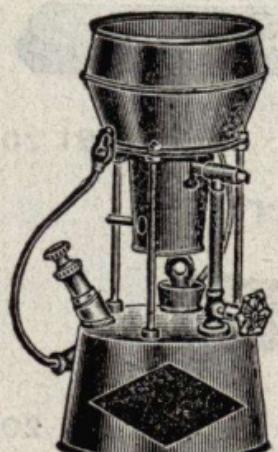
Gasoline Soldering Furnaces



No. 42T—\$7.50
For Gasoline

Every plumber knows our Pioneer Hot Blast Coil Furnace. We make it as it was originally, which is a guarantee of the durability and mechanical construction. All castings are made of malleable iron or brass as found most serviceable. Tank is made of heavy galvanized iron and a bottom ring protects the tank from wear and strengthens it. The shield is made of heavy iron with beads wired. Air pressure is pumped in the tank with a rubber bulb of superior quality. All parts are made interchangeable. Thousands in daily use. Shipped with one shield unless otherwise specified.

	List Price
Capacity	one gallon
Height, over all.....	$17\frac{3}{4}$ inches
Diameter	$8\frac{1}{2}$ inches
Net weight	$9\frac{1}{2}$ lbs.
Shipping weight.....	16 lbs.
Consumption	1 pint per hour

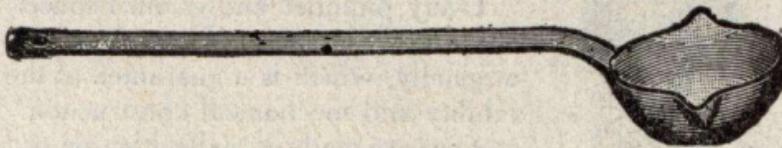


No. 73T—\$10.00
For Gasoline

We present herewith a strong, well constructed high grade coil furnace with an automatic pump in the tank, as shown in cut. This pump is made of brass and fitted with an automatic check valve, which prevents the air and gasoline from entering the pump cylinder. The tank is made of 16 gauge seamless drawn steel, retinned inside and out, and will withstand the acid used in connection with telephone and telegraph construction. This furnace will be appreciated by conduit workers, plumbers, gas fitters, etc. All parts are interchangeable. Shipped with one shield unless otherwise specified.

	List Price
Capacity	one gallon
Height, over all.....	$16\frac{3}{4}$ inches
Diameter	8 inches
Net weight	9 lbs.
Shipping weight.....	13 lbs.
Consumption	1 pint per hour

Pouring Ladles Double Lip.



	List Price
No. 555, 2½ inch bowl, each	\$0.50
No. 556, 3 inch bowl, each60
No. 557, 4 inch bowl, each80
No. 558, 5 inch bowl, each	1.00

Melting Pots



No. 560, 5-inch pot, each....	\$0.80
No. 561, 6-inch pot, each....	1.20
No. 562, 8-inch pot, each....	1.50

Half-Half Bar Solder

WARRANTED HALF AND HALF

No. 56, Half and Half, in bars, per lb.	\$1.20
--	--------

Wire Form Solder



No. 57, in wire form, per lb.....	\$1.20
-----------------------------------	--------

Rosin Core Flux Solder

in wire form,



No. 57 A, 1-lb. spools, per spool.....	\$1.50
No. 57 B, 5-lb. spools, per spool.....	6.50

Pony Soldering Coppers

Fitted with black lacquered handles.
Cuts show actual size of copper.

	List Price
	No. 51. \$1.20 Length 12 in.
	No. 52. \$1.00 Length 11 in.
	No. 53. .80 Length 10½ in.
	No. 54. .60 Length 9 in.
	No. 55. .50 Length 8½ in.

Standard Soldering Copper

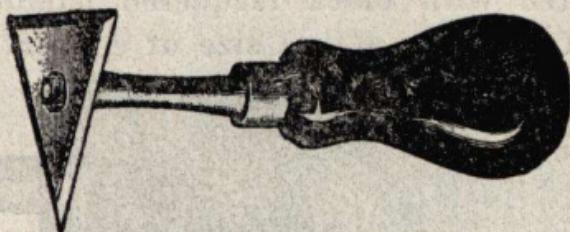


1500, $\frac{1}{2}$	lb., each.....	\$0.50
1501, $\frac{3}{4}$	lb., each.....	.75
1502, 1	lb., each.....	1.00
1503, $1\frac{1}{2}$	lb., each.....	1.50
1504, 2	lb., each.....	2.00
1505, $2\frac{1}{2}$	lb., each.....	2.20
1506, 3	lb., each.....	2.40
1507, 4	lb., each.....	3.20

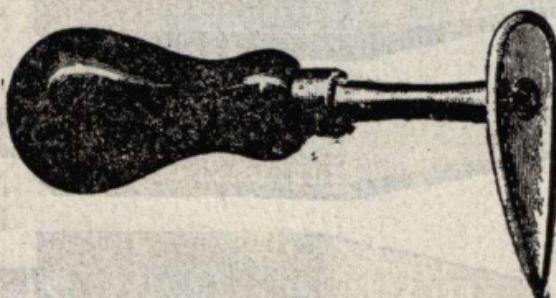
The weight given is that of each copper (not pair).

Any of above Coppers fitted with Handle,
10c net, extra

S h a v e H o o k s



**For scraping Lead Sleeves, Lead Pipe, Lead Cover
Cable Ends of Pot Heads, Etc.**



List Price

No. 379 D, Triangle, each.....	\$0.60
No. 379 C, Oval, each.....	.60

W i p i n g C l o t h s



No. 1226 M, Moleskin, each.....	\$0.50
No. 1226 T, Ticking, each.....	.30

For Wiping Lead Joints, Etc.

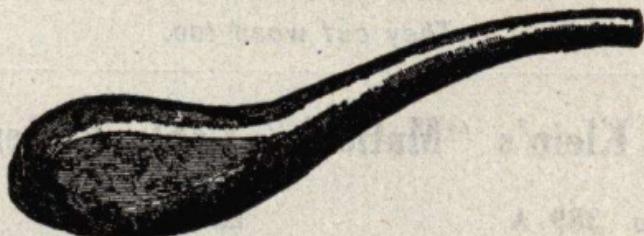


Box Wood Turn Pin

For expanding ends of Lead Pipe,
Lead Sleeves, Pot Heads, Etc.

	List Price
No. 1221 A,	1 inch each.....
No. 1221 B,	2 inch each.....
No. 1221 C,	3 inch each.....

Box wood Bossing Stick



No. 1227 W,each, \$1.80

For shaping Lead Sleeves, Lead Pipe,
Pot Heads Ends, Etc..

Box wood Dresser

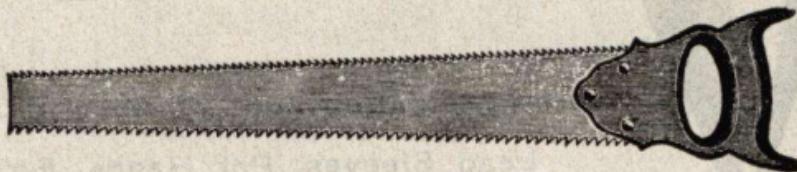


No. 1226 W.each, \$1.80

For shaping Lead Sleeves, Lead Pipe
Pot Head Ends, Etc..

Klein's Special Cableman's Saw

Double Edged



No. 65

Each

List Price

\$1.60

We have arranged this saw particularly for use on Cable work. One side has coarse teeth for cutting through lead cable sheath, while the other has finer teeth for cutting through the wire core. The saw is made of special steel, with apple handle fastened by three brass screws passing through the blade and into brass flush nuts on the other side. Every saw bears our brand. Length of blade 14 inches. Length overall 18 inches.

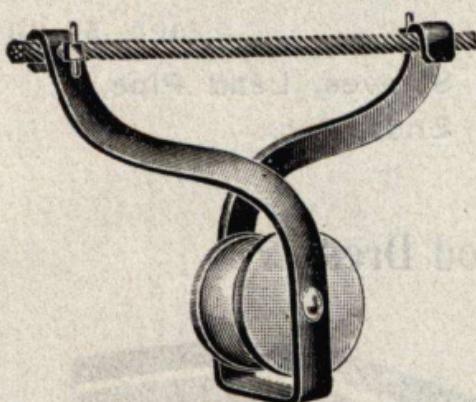
*One of these saws should be in every tool kit.
They cut wood too.*

Klein's "Matlock" Cable Roller

No. 389 A

Each

\$2.50



By the use of the "Matlock" Cable Roller, the work of running Aerial Cable is greatly expedited. A suitable number of rollers are attached to the messenger wire, in the simple manner shown in the cut, fastened in place by the T handle screws. The cable is then placed on the rollers

and carried on to any required distance. A great many feet of cable can thus be run with ease and in a short time. The maple roller has a metal bushing, extending beyond each end. This prevents wear on the roller and keeps it in the center of the frame. The frame is forged of mild steel. Weight 4½ pounds each.

Octagon Steel Crow and Digging Bars

List Price

No. 418 B.	1 $\frac{1}{8}$ x 6 ft., weight, 22 lbs. each...	\$4.80
No. 418 C.	1 $\frac{1}{8}$ x 7 ft., weight 26 lbs. each...	5.20
No. 418	1 $\frac{1}{8}$ x 8 ft., weight, 30 lbs. each...	5.70
No. 421 C.	1 x 6 ft., weight, 18 lbs. each...	4.10
No. 421 B.	1 x 7 ft., weight, 21 lbs. each...	4.50
No. 418 A.	1 x 8 ft., weight, 24 lbs. each...	5.00

Octagon Steel Tamping and Digging Bars

No. 421 E,	1 $\frac{1}{8}$ x 6 ft., weight, 23 lbs. each...	\$5.50
No. 421 D.	1 $\frac{1}{8}$ x 7 ft., weight, 27 lbs. each...	6.00
No. 421	1 $\frac{1}{8}$ x 8 ft., weight, 31 lbs. each...	6.50
No. 421 G.	1 x 6 ft., weight, 19 lbs. each...	5.00
No. 421 F,	1 x 7 ft., weight, 22 lbs. each...	5.50
No. 421 A.	1 x 8 ft., weight, 25 lbs. each...	6.00

These bars are made of a grade of steel purposely selected, and made up for us. This steel has high resisting qualities, and elasticity. It is a high priced steel to use for digging bars, but its use is justified in the saving it will afford in work performed. A cheap digging bar that will bend at every strain is a time waster, and a drain on the wage account. The slight additional first cost is a mere nominality, and will pay compound interest every day this tool is used.

Long Handle Telegraph Shovels

**Round Point Western Union Pattern
22 inch Front and Back Polished Straps
Seasoned Handles**



	Approximate Weight	List Price
No. 430 A, 6 ft.,	80 lbs.,	each..... \$2.80
No. 430	7 ft., 95 lbs.,	each..... 3.00
No. 431	8 ft., 110 lbs.;	each..... 3.30
No. 432	9 ft., 115 lbs.,	each..... 3.50

These shovels are made of a select grade of crucible steel especially adapted for that purpose. They have the proper seasoned handles heavy and sound stock. The handles have the popular "Western Union" bend, and are well reinforced with long steel straps, the straps are made in one piece with the blade. They are adapted for the very hardest service and are giving the best satisfaction.

Long Handle Telegraph Shovels

**Round Point, Straight Handles
22 inch Front and Back Polished Straps
Seasoned Handles**



No. 433 A, 6 ft.,	90 lbs.,	each..... \$2.80
No. 433	7 ft., 100 lbs.,	each..... 3.00
No. 434	8 ft., 110 lbs.,	each..... 3.30
No. 435	9 ft., 115 lbs.,	each..... 3.50

These shovels are the same quality as above, but have an entirely straight handle, this feature is of advantage in working in the bottom of deep post holes or in stiff soils and in confined places. The handle is protected by long front and back straps integral with the blade, the straps run along the handle for a length of 22 inches. This not only protects the handle from chafing, but strengthens it at a point where it has to sustain great strains.

"D" Handle Round Point Shovels

**9 inch Black Blade, Polished Straps
Seasoned Handle**

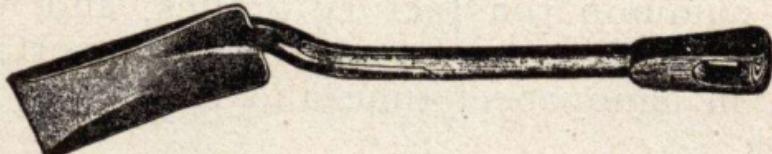


No.	Size	Approximate Weight per dozen	List Price
433R	No. 2, "Best" grade	66 lbs., each.....	\$2.50
1433R	No. 2, "First" grade	60 lbs., each.....	2.00

"D" Handle Square Point Shovels

**9 inch Black Blade, Polished Straps
Seasoned Handle**

No.	Size	Approximate Weight per dozen	
1433 S	No. 2, "First" Grade	55 lbs., each.....	\$2.00
433 S	No. 2, "Best" Grade	60 lbs., each.....	2.50



Our "Best" grade Round and Square Point "D" Handle Shovels are made of select Crucible steel, especially adapted for shovels. They have selected handles and are intended for the heaviest service.

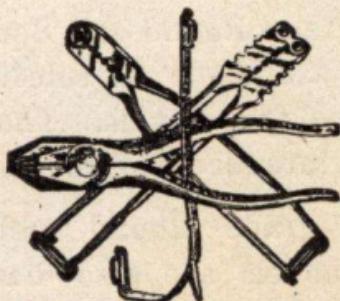
Our "First" grade Round and Square Point "D" Handle Shovels are also made of the same quality steel, but are lighter, and have a lower grade handle. There are several grades of cheaper shovels, but we only list the two highest grades, but can furnish cheaper ones if wanted.

Wherever You See This Sign You Can Buy
Klein Tools. Encourage the Merchant with
Your Patronage.

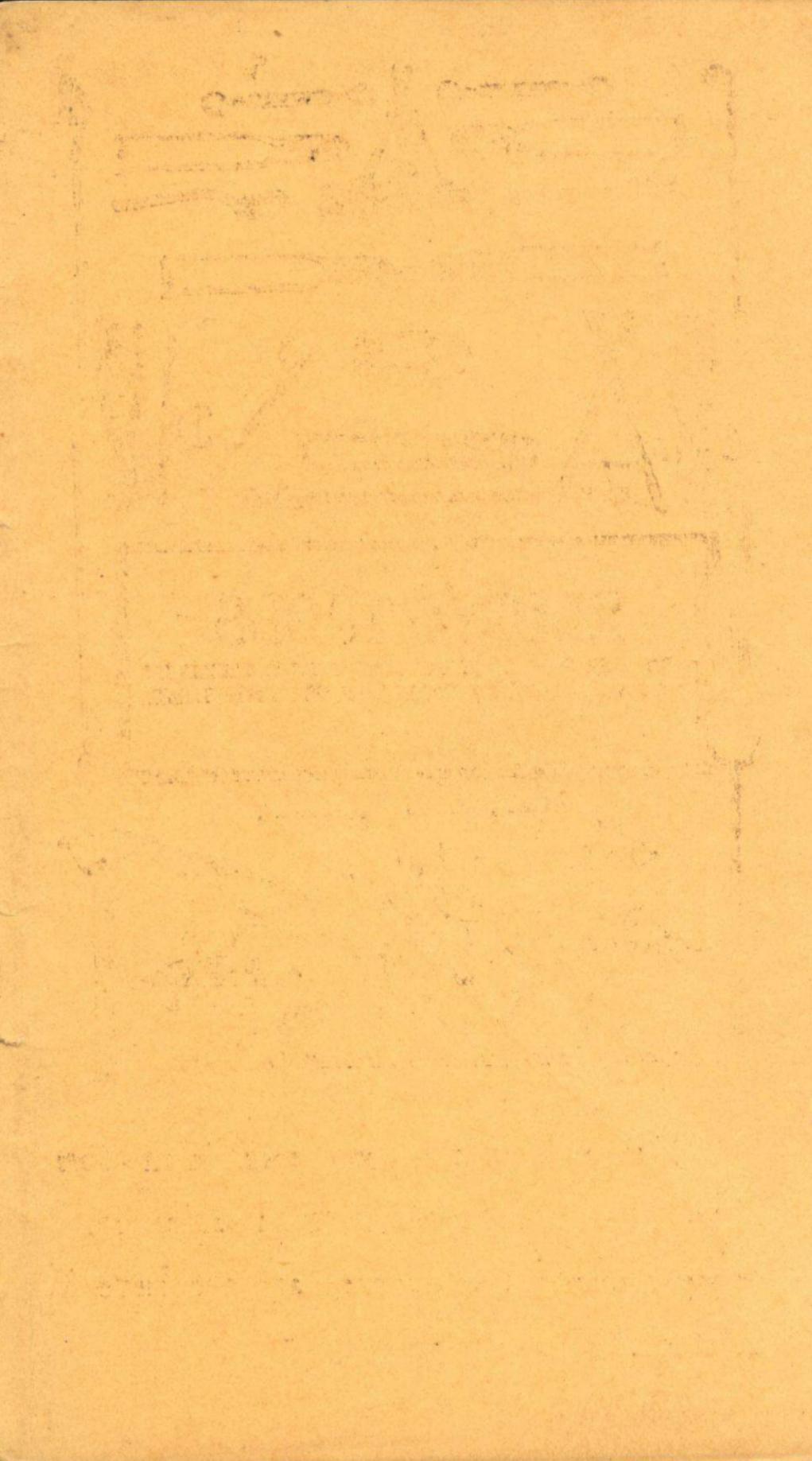
If there is no store in your locality carrying **KLEIN** tools we will appreciate it if you will give us the name of the merchant who ought to have them.

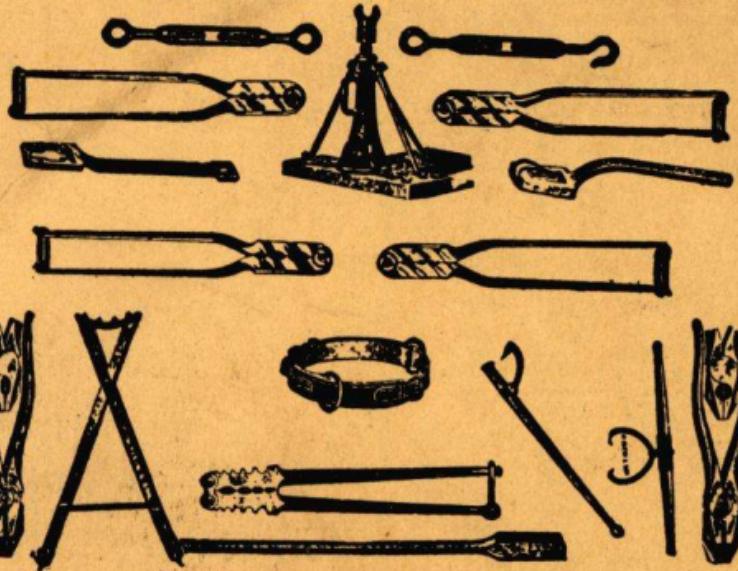


Klein tools cost but a trifle more than the common run factory grades, and will save this difference on the first important job, in annoyance, time and perfection of work.



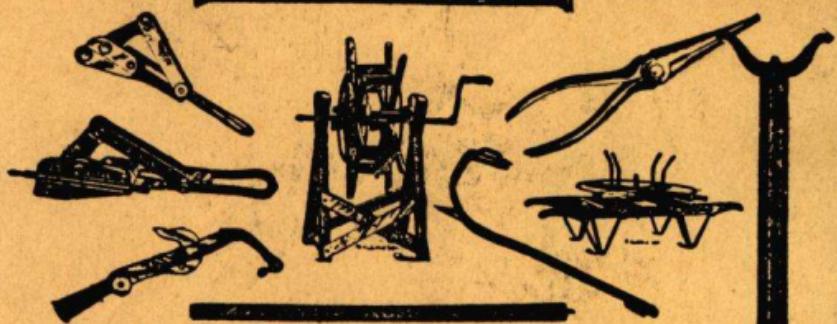
An experience of over 54 years, combined with the best materials and labor obtainable, enters in the production of **KLEIN QUALITY TOOLS.**





KLEIN'S TOOLS

WE SUPPLY EVERY TOOL USED IN
CONSTRUCTION WORK OR ON THE LINE.



If there is anything you want in the line of tools that is not listed in this booklet, send us your wants, the chances are we have it in stock.